FINANCIAL HISTORY

The magazine of the Museum of American Finance

"Andrew Carnegie: Forging Philanthropy" Exhibit Opens

The Largest Industries and Companies Before 1860

McDonald's and the New Franchising Paradigm

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FINANCIAL HISTORY

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IN THIS ISSUE | FEATURES


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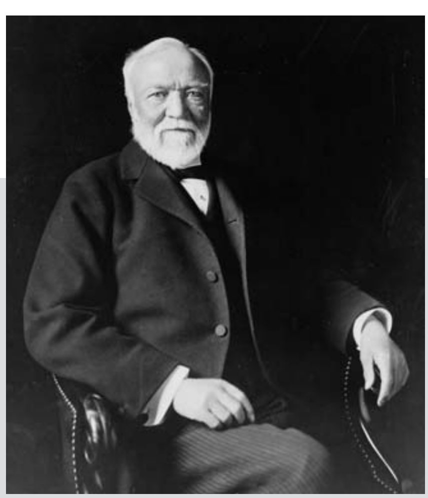
IN THIS ISSUE DEPARTMENTS

ON THE COVER

Portrait of industrialist and philanthropist Andrew Carnegie. "Andrew Carnegie: Forging Philanthropy" is on view at the Museum through October 2012.



Library of Congress

New Acquisitions Span Centuries and Nations

Message to Members

David J. Cowen | President and CEO

In the accompanying photo, Museum Advisory Board co-chair John Whitehead and I are hamming it up for the cameras with our latest acquisition: replicas of the historic pistols used in America's most famous duel between Alexander Hamilton and Aaron Burr. While Hamilton's life was cut short in that duel, his spirit lives on in our Museum through the lens of the importance of finance, the same finance that was integral to building this great nation.

In the compendium of history, successful commercial nations are built upon four pillars. The first is a rule of law. The second is a financial system comprised of central banks, stock exchanges and commercial banks, which provide a forum for savers of capital and users of capital to come together and interact. Third is the encouragement of entrepreneurs to innovate and create; while most entrepreneurs fail, the successful ones can create incredible companies. Fourth is the engagement of a managerial class to ensure the success of those companies. Whether it was the Dutch in the 1600s, the British in the 1750s, the United States in the 1790s or the current success in the East today, this basic formula has been followed time immemorial. We champion this model at the Museum, and our exhibits articulate the financial systems' role in our national development.

Our sister museum in China, the China Museum of Finance, also promotes finance and its role in a nation's development. Its chairman, Dr. Wang Wei, recently presented us with a spectacular hand-crafted replica of a 19th century financial toolbox, which will soon be on exhibit. On that same visit he relayed plans to open a third finance museum in China, the latest scheduled to open in Beijing this fall. Dr. Wei offered our Museum dedicated exhibit space there to feature objects illuminating our nation's financial heritage, and we are grateful for the opportunity to have a presence in China. In addition, the China Museum of Finance has invited our founder, John Herzog, to attend the grand opening and receive a lifetime achievement award for his contributions to financial literacy.

As the summer is upon us we reflect on a powerful first half of the year: the gala honoring Felix Rohatyn; headline speakers including Paul Volcker, Jack Bogle, Robert Shiller, Bill Rhodes, Vartan Gregorian and Niall Ferguson; tens of thousands of visitors; a half dozen Lunch and Learn events; the new Carnegie exhibit; and the election of four new board members — Sanford Crystal, Alfred Hurley, Michael Lipper and Consuelo Mack. And we acknowledge with heartfelt thanks for his immense contributions to the Museum for 25 years, the transition of our founder and friend, John Herzog, to the status of Chairman and Trustee *Emeritus*. $

John Whitehead and David Cowen with replica pistols from the duel between Alexander Hamilton and Aaron Burr.

China Museum of Finance Chairman Dr. Wang Wei (center) presents John Herzog and David Cowen with a hand-made replica of a 19th century Chinese financial toolbox.

MAY 1 1975 The Vanguard Group of Investment Companies begins operations, overseeing $1.8 billion in mutual fund assets.

MAY 2 1963 Edward C. Johnson II, the head of Fidelity Investments, starts a small mutual fund named the Magellan Fund.

Museum Founder John E. Herzog Retires From Board

John E. Herzog announced his retirement from the Museum's Board of Trustees at the Board's annual meeting on May 17. Herzog founded the Museum 25 years ago and served as Chairman until he stepped down from that post in 2010, while remaining an active Trustee. At its 2012 annual meeting, the Board honored Herzog by approving a resolution to designate him as Chairman and Trustee *Emeritus* for life.

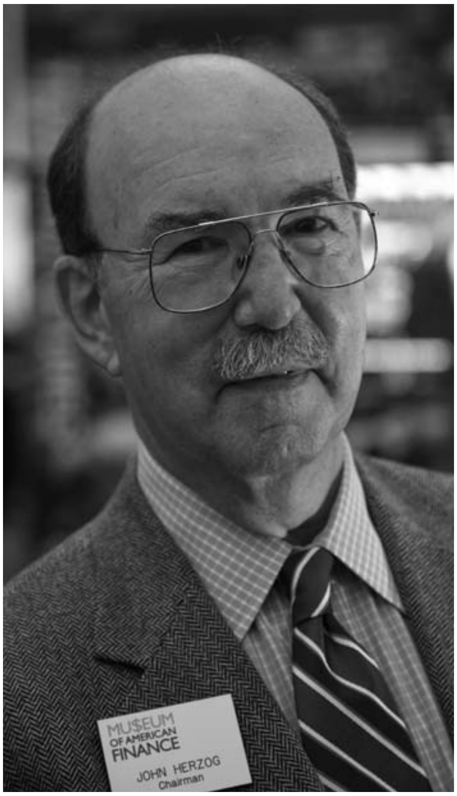
Herzog founded the Museum following the Stock Market Crash of 1987. It was his vision of a national museum to preserve, exhibit and teach about the nation's finances and financial history. In 2001, the Museum became an affiliate of the Smithsonian Institution, and in 2008 it moved from modest quarters to its current home in a historic bank building at 48 Wall Street.

Museum Chairman Dr. Richard Sylla said that John Herzog, as a student of American history and a Wall Street practitioner, knew that financial institutions and markets were, and still are, key contributors to US economic growth and our nation's rise in the world.

"John's vision and philanthropy have resulted in a splendid gift to New York, our country and the world. His passing of the torch inspires us to carry on with his vision and take the Museum to new heights," said Sylla.

At the annual meeting, three new members were unanimously elected to the Museum's Board of Trustees: Sanford F. Crystal, Executive Vice President of Frank Crystal & Company's Financial Institutions Group; Alfred F. Hurley, Jr., Vice Chairman of Emigrant Bancorp and Emigrant Bank; and A. Michael Lipper, Founder and President of Lipper Advisory Services, Inc.

"Watching this remarkable Museum meet its mission over these past 25 years has been deeply gratifying. The support of an excellent staff and an enthusiastic Board of Trustees gives me great confidence in our future," said Herzog. $



Alan Barnett

25TH ANNIVERSARY EVENT

The Museum will commemorate the anniversary of the Crash of 1987 and the founding of the Museum on October 19 with a thought leadership forum on "Restoring the Faith of Investors."

For information, visit **www.moaf.org/events**.

MAY 10 1873 As New York banks suspend loan payments, the Panic of 1873 begins — setting off the nation's deepest economic depression until 1929.

MAY 15 1878 The Tokyo Stock Exchange Co., Ltd. is established, primarily to trade bonds.

MAY 26 1896 The Dow Jones Industrial Average is first published. Its 12 initial members are the great industrial giants of the time.

"Andrew Carnegie: Forging Philanthropy" Exhibit Opens

On April 10, the Museum unveiled "Andrew Carnegie: Forging Philanthropy," an exhibit on the life and work of industrialist Andrew Carnegie, with a spotlight on his love of Scotland, his business life and his philanthropic activities. The exhibit features objects and documents from the Museum's collection, as well as from the Andrew Carnegie Birthplace Museum in Scotland and the Carnegie Corporation of New York Archives at Columbia University's Rare Book and Manuscript Library.

Highlights include George Soros' Carnegie Medal for philanthropy, a $100,000 US Steel gold bond certificate issued to Carnegie for part of the sale of Carnegie Steel to JP Morgan, and the two-sided American/Scottish flag that flew at Carnegie's Scotland estate, Skibo Castle.

The exhibit was unveiled at an event presented in conjunction with the American-Scottish Foundation in celebration of Scotland-Tartan Week in New York City. The event featured a panel discussion with leading Carnegie scholars from Scotland and the US. Participants included Carnegie Corporation President Vartan Gregorian, biographer Peter Krass, Professor Ellen Condliffe Lagemann, Carnegie UK Trust Chief Executive Martyn Evans and New York Public Library President Anthony Marx.

"Andrew Carnegie: Forging Philanthropy" will be on view through October 2012. $

Museum of American Finance

Courtesy of George Soros

Museum of American Finance

Clockwise from top: "An Object Lesson" satirical cartoon about Carnegie's philanthropy published in *Puck* magazine, 1901. "Andrew Carnegie: Forging Philanthropy" occupies the Museum's feature gallery. George Soros' Carnegie Medal for philanthropy.

JUN 2 1775 The national debt of the United States is born, as the Continental Congress authorizes a loan of six million pounds sterling to buy gunpowder.

JUN 6 1934 The Securities Exchange Act, which creates the SEC, is signed into law by President Franklin D. Roosevelt.

Museum Announces Ruth Baker Financial Education Internship

The Museum is thrilled to announce the creation of the Ruth Baker Financial Education Internship, which will provide a qualified college or graduate level student with opportunities to work within the Museum's education department. The internship is named for the Museum's long-time volunteer and educator, Ruth Baker, who passed away in 2011.

The Ruth Baker Intern will assist with teaching current Museum class offerings, evaluate the current components of the Museum's financial education program and make suggestions for improvement, develop a new education program that will complement the current curriculum, and teach the new program to students and Museum educators, so they can incorporate it into their classes and presentations as part of the Museum's Center for Financial Education.

The intern will also participate in and contribute to the Museum's docent training program, evaluate its effectiveness and make suggestions for improvement.

The Museum will begin accepting applications for this paid internship opportunity in July, and will commence the program in the fall.

For information or to receive an application, please e-mail Director of Exhibits and Educational Programs Maura Ferguson at educator@moaf.org. $

Museum of American Finance

Ruth Baker with educational material she produced for the "Rockefeller Rediscovered" exhibit.

MU$EUM OF AMERICAN FINANCE

UPCOMING EVENTS CALENDAR

Jun 20 Walking Tour: Presidents and American Finance. 11 a.m. – 12:30 p.m. $15 includes admission to Museum and Lunch and Learn with Antoin Murphy.

Jun 20 Lunch and Learn Series: Antoin Murphy on "The First Stock Market Boom and Collapse: John Law and the Mississippi System." 12:30 – 1:30 p.m. $5 includes Museum admission.

Jul 11 Walking Tour: Alexander Hamilton's New York. 11 a.m. – 12:30 p.m. $15 includes Museum admission.

Jul 21 Walking Tour: History of Wall Street. 1 – 2:30 p.m. $15 includes Museum admission.

Aug 9 Walking Tour: Wall Street History from the Dutch to Today. 11 a.m. – 12:30 pm. $15 includes admission to Museum and Lunch and Learn with David Cowen.

Aug 9 Lunch and Learn Series: David Cowen on "Haym Salomon: Life, Legacy, Myth and Reality of the Jewish-American Revolutionary War Financier." 12:30 – 1:30 p.m. $5 includes Museum admission.

Aug 18 Walking Tour: History of Wall Street. 1 – 2:30 p.m. $15 includes Museum admission

For information and reservations, please contact Tempris Small at 212-908-4110 or tsmall@moaf.org. Visit our website at www.moaf.org/events for additional events and tours.

JUN 9 1940 Federal income tax withholding is implemented for the first time.

JUN 15 1903 Henry Ford launches the Ford Motor Co. in a refurbished wagon factory in Detroit, with $28,000 raised from 12 investors.

JUN 21 1970 The Penn Central, one of the world's largest and oldest railroad operators, declares bankruptcy when the federal government refuses to guarantee $200 million in emergency loans.

From the Collection: US Steel Bond Signed by Andrew Carnegie

By Maura Ferguson and Becky Laughner

In 1993, the Museum received one of its most historically significant collection items, a $100,000 United States Steel Corporation bond certificate issued to Andrew Carnegie on June 14, 1901, redeemable by JP Morgan Co. Donated by Museum member David Hunter, the handsome red certificate features a vignette of industry at its height — locomotives traveling through a factory — and features the names of the country's two most prominent industrialists. At the time it was donated, it was the only known certificate of its kind. In addition to its historical significance, this document is remarkable because it signifies an important turning point in Andrew Carnegie's life; it represents his retirement as a business magnate to dedicate his life to philanthropic pursuits.

By 1900, the boom in the steel industry had ended. Facing overproduction and decreased profits, companies that created finished steel products began to produce their own steel instead of buying from Carnegie Steel and similar companies. Always an innovator, Carnegie expanded his business to include finished steel products. In 1901, to eliminate his competition, J.P. Morgan of the Federal Steel Company brokered a deal through Carnegie's right-hand-man, Charles Schwab, to purchase the Carnegie Company.

From the sale totaling $480 million, Carnegie earned $225,639,000 for himself. The transaction created the first billion dollar corporation, US Steel, and catapulted Carnegie to the position of world's richest man. For his share, approximately $6.5 billion in today's terms, Carnegie requested to be paid *only* in first-mortgage 5% US Steel gold bonds and cash, the most secure and liquid forms of investment. In the event of the failure of US Steel, the bonds would be guaranteed by a first mortgage of the company, and Carnegie knew it was worth at

CORPORATE AND FOUNDATION SUPPORT

The Museum is most grateful for the support of the following corporations and foundations who have generously provided funding for the Museum in the past year.

- Abner, Herrman & Brock
- American Express
- Anna-Maria & Stephen Kellen Foundation
- Anonymous
- The Asher Family Foundation
- Aronson Johnson Ortiz
- Berkshire Capital Securities
- BlackRock Foundation
- Bloomberg
- BLS Investments
- The Briar Foundation
- Carter, Ledyard & Milburn, LLP
- CFA Institute
- CME Group
- Consolidated Edison Co. of New York
- DeWitt Stern
- Donaldson Fund
- Downtown Alliance
- Fagenson & Co., Inc.
- The Felix & Elizabeth Rohatyn Foundation
- Financial Recovery Technologies
- Geduld Cougar Foundation
- The Guardian Life Insurance Company of America
- Henry & Elaine Kaufman Foundation
- Herzog & Co., Inc.
- ING Americas
- Institute for Private Investors
- Knight Capital Group
- Lazard
- Lower Manhattan Development Corporation
- MacDonald & Cie
- McRoberts Protection Agency
- Morgan Stanley
- Muriel Siebert & Co., Inc.
- Nemco Brokerage, Inc.
- NYSE Euronext
- NYSE Euronext Foundation
- Patricof Family Foundation
- Peter G. Peterson Foundation
- Peter Jay Sharp Foundation
- Saber Partners, LLC
- Saybrook Capital
- Shenkman Capital Management
- The Shoreland Foundation
- Standard & Poor's
- The Stone Foundation
- Ted Moudis Associates
- Twenty-First Securities
- UBS
- Wachtell, Lipton, Rosen & Katz
- Wells Fargo & Company
- Winans International
- W. R. Berkley Corporation
- The Zweig Funds

► For information about supporting the Museum's activities and programs, please contact Jeanne Baker Driscoll, Director of Development, at 212 908-4694 or jdriscoll@moaf.org.

JUL 1 1791 The first daily securities auction is reported in New York City, as John Pintard and A.L. Bleecker & Sons advertise a "Sale of Public Securities at Auction."

JUL 3 1884 Charles Henry Dow, partner in Dow Jones & Co., publishes the earliest known index of American stocks in his *Customer's Afternoon Letter*.

least enough to cover his share. With a plan in mind for immediate charitable giving, Carnegie wrote, "I have at least 50 millions [in pounds sterling] all in 5% gold bonds… I could as well had 100 millions [sterling] in a few years, but no sir. I'm not going to grow old piling up, but in distributing."

To protect his bonds' interest from high New York City taxes, Carnegie vaulted them at the Home Trust Company in Hoboken, New Jersey, a private bank he had established to manage his trust funds and will. With $300 million worth of bonds tucked away in his Hoboken vault in 1901, Carnegie quickly set about giving away his money and established independent trusts around the world to do so.

Through these trusts he funded countless universities, established more than 2,811 libraries through the English-speaking world, created pensions for university professors and the workers of his mills, poured $25 million into international peace efforts, donated 7,000 organs to churches, donated many millions to universities in the US and abroad and funded countless other philanthropic projects. Before his death in 1919, he had donated $350 million.

The Museum's $100,000 US Steel bond is currently on view in the "Andrew Carnegie: Forging Philanthropy" exhibit, which will run through October 2012. **$**

JUL 8 1839 John D. Rockefeller is born in Richford, NY. As founder and president of the Standard Oil Company, he becomes the world's first billionaire.

JUL 8 1889 The first issue of *The Wall Street Journal* is published by Charles Henry Dow, Edward Davis Jones and Charles M. Bergstresser.

JUL 26 1876 The earliest known stock and bond tables are published in the *Massachusetts Centinel*.

John Sherman: The Finance General

By Brian Grinder and Dan Cooper

> *"Every man has a theory of finance of his own, and is indifferent to any other. At best the subject is a dry one. Still, the problem of providing money to carry on the expensive operations of a great war, and to provide for the payment of the vast debt created during the war, was next in importance to the conduct of armies, and those who were engaged in solving this problem were as much soldiers as the men who were carrying muskets or commanding armies. As one of these I feel it my duty to present the measures adopted and to claim for them such merit as they deserve."*
>
> —John Sherman

John Sherman is probably best remembered today, if he is remembered at all, as the author of the Sherman Antitrust Act of 1890. The act was the first piece of federal legislation to prohibit trusts and was used in the early 1900s to break up large companies such as Standard Oil and the Northern Securities Company. More recently it has been invoked against Microsoft's alleged monopoly on web browsers.

Although Sherman was actively involved in national politics for nearly the entire last half of the 19th century, he is little-known today and has always been overshadowed by his older brother, the famous Civil War general, William Tecumseh Sherman. This is unfortunate because in the area of finance, John Sherman was probably the most influential politician of his day. Of course the Sherman Antitrust Act played an enormous role in shaping the modern corporation, but Sherman's influence in the world of finance goes back to his early days in Congress. Such influence is all the more remarkable given the circumstances of his childhood in Ohio and the paucity of his formal education.

John Sherman was born in Ohio in 1823. He was the eighth of 11 children. Tragedy struck in 1829 when John's father died unexpectedly, leaving his mother to raise the children on her own. Difficult financial circumstances forced Mary Sherman to farm many of her children out to friends and relatives. The Thomas Ewing family took in William and later secured an appointment to West Point for him, where he began his storied military career.

John lived with his father's cousin for about four years while he studied at a private school, but at the age of 14 he quit school and found a job on the Muskingum River improvement project.

In all, Sherman's formal education consisted of eight years of private school. He also received instruction in the law from friends and relatives and was admitted to the bar of Ohio at the age of 21. What Sherman lacked in education, he made up for with his natural bent towards finance and economics. He practiced law for about 10 years before being elected to Congress. During that time he was also involved in several business ventures that helped hone his financial skills.

Sherman's law practice fell by the wayside once he began his political career, which spanned over half a century. Beginning with his election to the House of Representatives in 1855, Sherman was destined to a life of public service. In 1861, he assumed Salmon P. Chase's Ohio Senate seat after Chase resigned to become Abraham Lincoln's Treasury Secretary.

Shortly after the Civil War ended, Sherman wrote to his brother William and advised him to "avoid all expressions of political opinion" about the reconstruction controversies that were erupting in Washington, DC at the time. "As for myself," Sherman wrote, "I intend to stick to finance, but wherever I can I will moderate the actions of the Union party, and favor conciliation and restoration."

Sherman would resign his own Senate seat to become Secretary of the Treasury under Rutherford B. Hayes. After an unsuccessful bid for the presidency in 1880, Sherman returned to the Senate where he remained until William McKinley tapped him as Secretary of State in 1897. Unfortunately, Sherman was not up to the task and resigned in 1898, effectively ending his long career in politics.

Sherman was at his best as Secretary of the Treasury. Historian Kenneth Davison writes, "…Sherman not only emerged as the strongest and most important man in the Hayes cabinet, but also as one of the more outstanding Secretaries of the Treasury—certainly the best one in the generation from Grant to McKinley."

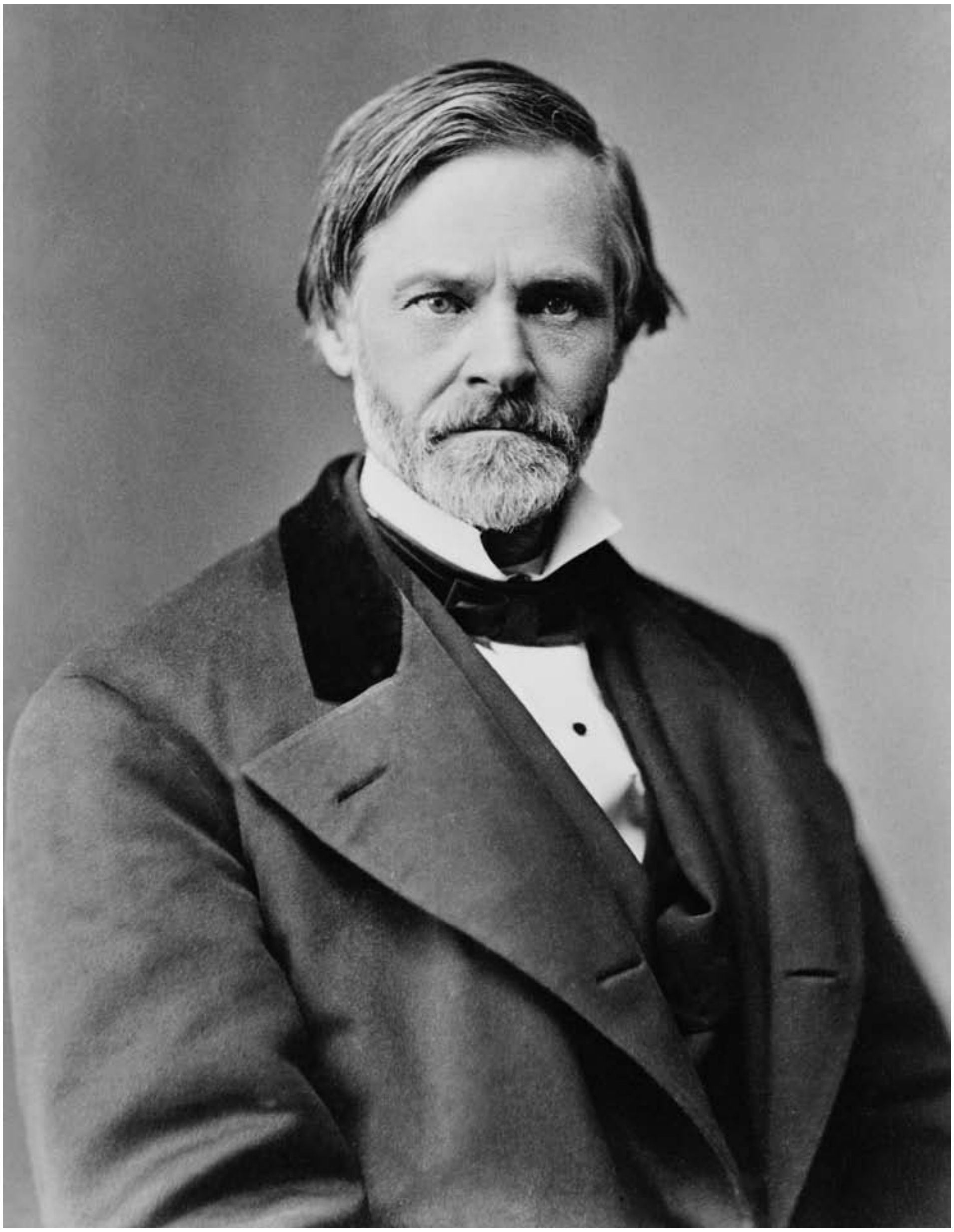
Davison argues that Sherman was highly qualified for the position because of his six years as chair of the House Ways and Means Committee and his 16 years in the Senate "where he specialized in the intricacies of financial policy."

During the Civil War, the US was forced to abandon the gold standard in order to finance the war. After the war, there was increasing pressure to return to the gold standard. The Panic of 1873 brought matters to a head, but a lack of leadership from President Grant and his Treasury Secretary William Richardson forced Sherman to take action in the Senate. In what later would be described as the "Crime of 1873," the Coinage Act, which Sherman skillfully guided through the Senate, called for backing US paper currency with gold and demonetizing silver.

The Resumption Act of 1875 committed the US government to resume gold payments for legal tender beginning in

January 1879. Although Sherman's predecessors at the Treasury Department did nothing to prepare for the resumption of gold payments, Sherman was up to the task. He issued loans that would allow him to build up the government's gold reserves, worked with New York bankers to help make the loan issuance a success, soothed the bankers' nerves when elements in Congress clamored for repayment of the loans in silver instead of gold, and strove to eliminate the premium gold coins had enjoyed over non-redeemable currency since the war. On Resumption Day, January 2, 1879, Sherman's efforts were successful in preventing a run on the government's gold reserves. According to historian Irwin Unger, "At the close

Cartoon showing John Sherman, Secretary of the Treasury, being attacked by his foes, 1891.



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John Sherman

of business, $132,000 in notes had been redeemed and $400,000 in gold exchanged for the more convenient paper."

Sherman believed his success at the Treasury was the perfect springboard to the presidency in 1880. However, James A. Garfield, who gave the nominating speech for Sherman but eventually ended up with the nomination himself, was not convinced. Garfield biographer Kenneth D. Ackerman accurately described Garfield's dilemma:

> On paper, Sherman's claim to the White House made perfect sense. But Garfield knew better. Personality mattered in politics, and, to Garfield, Sherman had earned his nickname, "the Ohio icicle." Square-shouldered, six feet tall, lanky, with a beard and dark hair, Sherman in private came across as aloof: "reserved, self-contained, affable when approached, a good eater, a moderate drinker," noted a dinner companion. In public, he was "not eloquent, though a graceful speaker, confining himself almost entirely to statements of fact."

Sherman was also handicapped by the fact that he had not served in the military during the Civil War. President Lincoln, fearing a brain drain in Congress as politician after politician dashed off to war, urged Sherman to stay in Washington during the war, and Sherman complied.

In his autobiography, Sherman wrote that one of his purposes in writing it was "to correct the wild delusions of many honest citizens who became infected with the "greenback craze" or the "free coinage of silver." Sherman feared a return of the war's runaway inflation and, like many of his contemporaries, believed that returning to the gold standard was only natural. In an 1874 speech to the Senate, Sherman made clear his belief in the supremacy of a gold-backed dollar:

> This axiom [that a specie standard is the best and the only true standard of all values] is as immutable as the law of gravitation or the laws of the planetary system, and every device to evade it or avoid it has, by its failure, only demonstrated the universal law that specie measures all values as certainly as the surface of the ocean measures the level of the earth… I might, to establish this axiom, repeat the history of finance, from the shekels of silver, "current money with the merchant," paid by Abraham, to the last sale of stock in New York. I might quote Aristotle and Pliny, as well as all the writers on political economy of our own time, and trace the failure of the innumerable efforts to establish some other standard of value, from the oxen that measured the value of the armor of Homeric heroes to the beautifully engraved promise of our day; but this would only be the 100-times-told tale which every student may find recorded, not only in schoolbooks, but in the writings of Humboldt, Chevalier, Adam Smith and others of the most advanced scientific authorities. They all recognize the precious metals as

the universal standard of value. Neither governments, nor parliaments, nor congresses can change this law. It defies every form of authority, but silently and surely asserts itself as a law of necessity, beyond the jurisdiction of municipal law… So that for all practical purposes we may regard gold as the only true standard, the true money of the world, by which the value of all property, of all productions, of all credits, and of every medium of exchange, and especially of all paper money, is tested.

In spite of Sherman's belief that the gold standard was natural law, debate continues to this day over whether or not paper currency should be tied to a precious metal such as gold. Sherman's efforts to return the US to the gold standard was successful in stemming inflation, but the deflation his actions helped bring about during the latter part of the 19th century was detrimental to agriculture and manufacturing.

While it is tempting to compare and contrast the financial attitudes and actions of modern politicians with Sherman's, our own biases and modern day sensibilities tend to make such comparisons mere exercises in futility. We can, however, honor and admire an able politician, a finance general so to speak, who served his country to the best of his ability. $

Brian Grinder is a professor at Eastern Washington University and a member of Financial History*'s editorial board. Dr. Dan Cooper is the president of Active Learning Technologies.*

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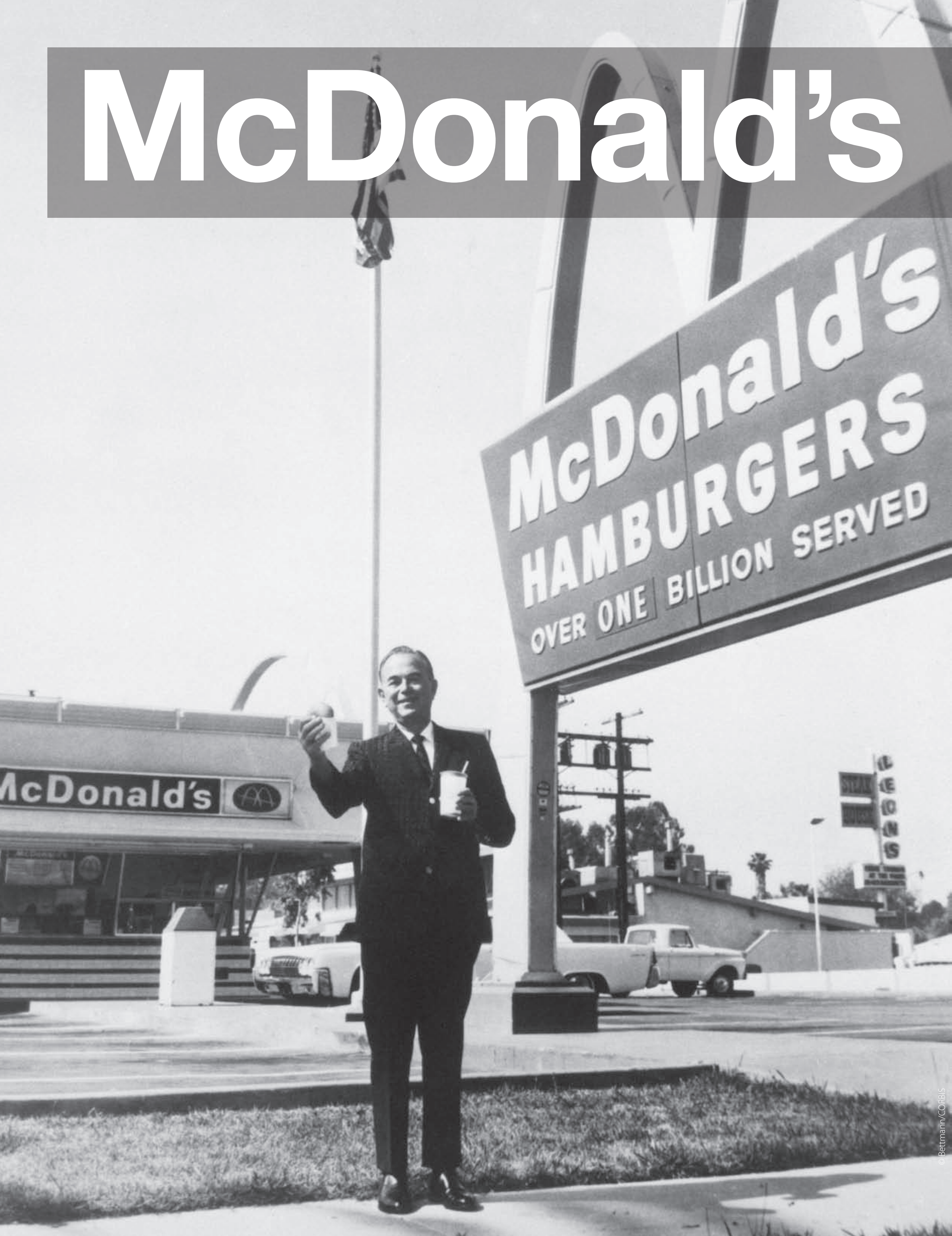
McDonald's



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and the New Franchising Paradigm

By Steven Mark Adelson

If you were to ask for the name of world's largest real estate developer and property management firm, you may be surprised by the answer: McDonald's. Aside from being the largest purveyor of food in the world, the company controls the real estate in 33,000 restaurant locations in 119 countries and territories.

The McDonald Brothers

The founders of McDonald's — Richard and Maurice McDonald — did not start out by selling hamburgers.

Natives of New Hampshire, the brothers moved to Los Angeles at the start of the Depression in the hopes of finding opportunity and a better life. By 1940, they relocated to San Bernardino, then a small bedroom community 55 miles east of Los Angeles, and with a $5,000 loan from the Bank of America opened a drive-in with a menu consisting of 25 items, with slow-smoked barbecue as the featured item.

Located near a high school, their new place quickly became successful and soon employed 20 carhops. But by 1948, the McDonald brothers were thinking of selling for many reasons: dishes, glassware and silverware had to be replaced due to constant breakage and theft; turnover of both carhops and cooks were high; and wages consumed 35–40% of their gross income. But instead of selling the business outright, they experimented with something new.

The McDonald brothers wanted to implement a trend they noticed. A new concept called "self-service" was becoming popular with supermarkets and variety stores, which offered lower prices through higher turnover and a minimum of employees. As Dick McDonald explained, "Our whole concept was based on speed, lower prices and volume. We were going after big, big volumes by lowering prices and by having the customer serve himself."

The McDonald brothers examined their receipts over the prior three years and saw that hamburgers and cheeseburgers represented 80% of their sales. They therefore reduced the menu from 25 to nine items.

Out went the car hops, the indoor seating, the dishwasher and the barbecue pit. The plates, the flatware and the glasses were replaced with paper bags, paper cups and paper wrapping. To ensure that their new place didn't become a teenage hangout, there were no jukeboxes, vending machines or pay phones.

The brothers redesigned the kitchen along the lines of a factory assembly line. They replaced their three-foot cast iron grill with two, custom-made stainless steel six-foot grills and added new equipment designed to meet the needs of food production on an industrial scale — a machine to quickly form hamburger patties, a condiment pump that would squirt just the right amount of ketchup or mustard with one squeeze and a "heat bar" under which to place the finished burgers.

And like a factory assembly line, a separate employee was trained to do each separate function. This meant one employee only had to be taught how to perform one repetitive task. Skilled and semi-skilled workers were no longer necessary — an unskilled teenager paid minimum wage would grill the hamburger, another would add condiments and wrap it, etc. Likewise, milk shakes and french fries were premade and placed into an "inventory" behind the counterman until the order arrived.

Richard came up with a new design for a 1,600 square foot drive-in hamburger stand with a slightly cantilever roof where he placed on both sides a 30-foot parabolic golden arch to be lit by neon at night.

With the new system, customers would have to walk up to the service window and place their order, and they would receive it in less than 60 seconds.

The new operation was so efficient that labor costs were slashed to 17% of gross income, allowing the brothers to price their hamburgers at 15¢, roughly half of what everyone else was charging.

After their regular customers got used to the new self-service format business boomed; during peak serving times it was not uncommon to see to lines 20 or more people deep. The format was so unique that their hamburger stand made the cover of the July 1952 issue of *American Restaurant* magazine with the headline "One Million Hamburgers and 160 Tons of French Fries a Year."[1]

Soon the brothers were making $350,000 per year and splitting $100,000 in profits (roughly $1,000,000 today).

Then in 1954, they put in an order to the Prince Castle Sales Division in Oak Park, Illinois. They had no idea where that order would eventually lead.

Ray Kroc

Ray Kroc was born on October 5, 1902 in Chicago. In his sophomore year of high school he dropped out. Lying about his age (he was 15), he was sent to France during World War I to drive ambulances for the Red Cross.

After the war he drifted about until 1926 when he began a career as a traveling salesman for the Lily Cup Company (later called the Lily-Tulip Company in 1929). He sold paper cups to a variety of ice cream parlors, dairy bars, soda fountains, coffee shops, mom-and-pop dinettes and bars (cocktails and mixed drinks using liqueurs and ice cream were growing in popularity since the repeal of Probation),

Ray Kroc, founder and chairman of McDonald's Corporation, stands outside one of his franchises, holding a hamburger and a drink.

eventually establishing new accounts at Wrigley Field, Walgreen's (which often had a lunch counter in their drug stores) and in factory commissaries at Swift, Amour and US Steel.

Then in 1939 the Lily-Tulip Company turned down an offer to be the national distributor for a product that would dovetail the sales of paper cups.

Earl Prince, a mechanical engineer, invented a five-spindled mixer that he called The Multimixer. Kroc immediately saw the sales possibilities. At the age of 37 he acquired the marketing rights and formed the Prince Castle Sales Division. He went back to his old customers and sold them on the advantage of serving their customers faster and selling more drinks. With his knowledge and experience in sales and in the food service industry, Kroc was soon selling 9,000 units a year at $150 each (over $1,000 apiece today) and earning a salary of $20,000 by the late 1940s.

Unfortunately, the good times did not last. By the early 1950s, sales were down to just 2,000 units. Competition from Hamilton Beach and the flight of city dwellers to the suburbs was killing off the corner drugstore with their lunch counters and soda fountains, representing two-thirds of his customers. The writing was on the wall — demand for the Multimixer was declining by the month. Ray Kroc was 52, an age where most men begin to think about retirement, and now he needed another way to make a living.

Then in 1954, he received an order that would change his life.

Reconnoitering

The order was for two more Multimixers for a small drive-in located in San Bernardino. The drive-in had already ordered eight recently, and now they needed two more? "What kind of an operation required a single restaurant to make 50 milkshakes at the same time?" Kroc flew out to California to see for himself.

In his memoir, *Grinding It Out*, Kroc describes the San Bernardino operation, noting the building's all-glass walls, the long lines, the spotless kitchen and the busy staff in their "spiffy white shirts and trousers, bustling around like ants at a picnic," serving hamburgers and fries to the working-class families that drove up. By lunchtime, 150 people had lined up. "Something was definitely happening here, I told myself this had to be the most amazing merchandising operation I had ever seen!"

Over the last 30 years Kroc observed the food service industry up close, from management organization, kitchen layout and food preparation. He made a great deal of mental notes as to what worked, what didn't and why. Mostly Kroc noticed that many independent food service operators had a "by-the-seat-of-your-pants" management style. Now here was something different: a small, streamlined establishment which had worked out standardized procedures to quickly deliver a uniform product at a low price.

The Offer

Kroc envisioned duplicating hundreds of this little stand throughout the country on a franchise basis. A conventional drive-in would cost about $300,000 (in the mid-1950s), but a unit like this would run about $40,000, plus an additional $30,000 to acquire the half-acre store site. Although initially the McDonald brothers said "no" (they liked going home at night and dreaded all the traveling that running a franchising organization would entail), Kroc was persistent and eventually got them to sign him on as their exclusive franchising agent. Unfortunately, he was so anxious to become their agent that he found himself obligated to a horrendous financial arrangement.[2]

The arrangement he devised was as follows: the initial franchise fee would be $950 and would be charged a 1.9% service fee assessed on their food sales, with 0.5% paid to the McDonald brothers as a royalty. Kroc would keep the other 1.4% as a service fee to finance and run his office.

From the start, Kroc was determined that McDonald's not become the sort of operation he considered to be harmful to long-term growth. Specifically:

1. Demanding big, upfront fees for franchises. Kroc wanted individual owner/operators — people willing to place their life savings if need be — to invest in this hamburger stand, and thus be motivated to make *their* business a success. He refused to consider anyone who would be an absentee owner.
2. Requiring the franchisee to acquire all of their stock, supplies and equipment through the franchisor, who would then charge a hefty mark-up. This spurious relationship was a common practice and accepted under the banner "Quality Control," but in reality this was the primary means by which the franchisor made its money, along with collecting monthly royalties and whatever fees it could levy. Kroc would negotiate with purveyors to obtain the best price and pass along any savings.[3]
3. Kickbacks from suppliers to the franchisor were forbidden. Kroc believed this negated the promise of delivering a lower price through bulk purchases.
4. Also forbidden was the awarding of "Territorial Licenses." In this arrangement, an individual or corporation is awarded the exclusive right to conduct business within a specific geographic region, such as a state or a city. In exchange, the franchisor receives an upfront payment, which can run into the hundreds of thousands or millions of dollars. The Territorial Franchise holder would then scout for sites, construct his own units or recruit others to establish individual franchises and collect fees or royalties from them.
5. Often little thought was given to site selection, new product development or on-going management training beyond

The McDonald's Museum, a replica of the first corporate McDonald's restaurant, opened in Des Plaines, Illinois on April 15, 1955, after the franchise was acquired from founders Maurice and Richard McDonald.

the franchisee's initial course of instruction. Kroc believed these arrangements were detrimental to the success of the franchisee and the system being created because:

a. A conflict of interest existed between the franchisor and the owner of the franchise, deliberately designed to enrich franchisor.

b. The franchisor made his money before the franchisee did, and always at his expense.

Kroc envisioned McDonald's as having a symbiotic relationship with each owner/operator — where headquarters was there to support, and not exploit, the franchisee. As Kroc once explained it, "You're in business for yourself, but you're not by yourself." McDonald's would flourish only if the individual franchisees were successful.

On March 2, 1955, Kroc founded McDonald's System Inc. (now known as McDonald's Corporation) and on April 15, 1955, he opened his own McDonald's drive-in in Des Plaines, Illinois so that prospective franchisees could see a model store in operation and provide CPA certified income statements showing how much money these little hamburger stands could generate.

On average, a McDonald's stand at this time generated about $200,000 in sales yielding $40,000 in profits. Based on this information:

$200,000	Gross Sales
$3,800	Service Fee (1.9% of Gross Sales)
LESS $1,000	Royalty to McDonald Brothers (0.5% of Gross Sales)
$2,800	Remitted to McDonald's System Inc.

Under this system, financing the support infrastructure Kroc aimed for was unobtainable. Kroc demanded military-like adherence to standardization and uniformity, both from individual licensees and from a myriad of suppliers. To enforce this Kroc would need a contingent of field inspectors, along with specialists responsible for developing and refining various "back room functions" such as: establishing operating procedures, quality standards, finance, logistics, advertising, new product development, site selection and building construction. The problem now became how to finance a growing franchise organization without cash, collateral or even a record of profitability. Compounding this problem was the fact that the independents he wanted as licensees usually didn't have the startup money on hand, nor were they likely able to obtain a bank loan (then, as now, banks

were reluctant to provide loans for restaurants due to their high failure rate).

What Ray Kroc desperately needed was a "numbers man" who was well-versed in finance and could be as enthusiastic about McDonald's as he was in running the operations side. Without such a person, McDonald's would face bankruptcy in a few years due to undercapitalization.

A New Kind of Sandwich

TasteeFreez executive Harry J. Sonneborn was looking for new opportunities in 1956. Aside from being a "numbers man," his other talent lay in his ability to persuade bankers to loan him money when he needed it. Sonneborn had the rare talent of understanding numbers like a banker, knowing the language of real estate brokers and being able to construct a contract like a lawyer. Sonneborn contacted Kroc through a mutual friend and was immediately hired as Kroc's top financial officer.

Sonneborn's first order of business was to find a way for the McDonald's Corporation to make money that did not conflict with Kroc's concept of fairness to his franchisees, but would allow the company to maintain control over them so they would comply with his operating directives. Several of his first licensees were already ignoring his rules on operations management. Sonneborn realized that "fundamentally, the company couldn't make a profit on its franchise income because the bulk of it [remitted to McDonald's Systems, Inc.] was expensed as overhead."

To give a sense of how undercapitalized McDonald's was at this time, it lost $7,000 in 1956. In 1957 the company earned $26,000, most of which was from one-time licensing fees charged to new franchisees. At the start of 1958 McDonald's had a net worth of just $24,000 with 38 restaurants, and Kroc wanted to add 50 more units.

Sonneborn also expressed little faith in the contract McDonald's had with its licensees. "I never thought the franchise contract was worth the paper it was written on. It appeared that it could never stand up in a legal action." At the time, there wasn't much case law dealing with franchise contracts.

As Kroc once explained it, "You're in business for yourself, but you're not by yourself." McDonald's would flourish only if the individual franchisees were successful.

But there was with real estate and lease agreements.

In order to satisfy Kroc's requirements, Sonneborn got the company into the "landlord business" by devising a unique real estate investment strategy. He formed a separate and wholly owned real estate subsidiary in 1956 called Franchise Realty Corporation. FRC was tasked to locate and lease sites from landowners who were willing to build McDonald's units, which then would be leased back to the company on a 20-year improved lease agreement with the property owner. McDonald's would then take "sandwich position" by subleasing the store to the franchisee and charging a 40% markup for the real estate services Franchise Realty was providing.

Here is an example of the arrangement if the landowner charged McDonald's $600/month:

Rent Paid By Franchise Realty to Property Owner	$600
40% Markup Charged by Franchise Realty to Licensee	$240
Rental Fee Remitted to Franchise Realty	$840

In addition to the franchisee's base rent, FRC added an interest charge. Franchisees would stop paying the minimum base rent and start paying rents based on a percentage of their sales when the store reached a sales volume equal to 5% of sales (which rose to 8.5% in 1970).

Sonneborn's plan provided three main benefits:

1. The McDonald's Corporation received a steady and predictable minimum cash flow to cover its overhead costs. This cash flow would increase with every unit they opened.
2. Because the more money the franchise made, the more McDonald's made, this provided the motivation for corporate directed site selection to be meticulous when analyzing prospective locations. This maintained Kroc's dictum that the success of McDonald's be aligned with the success of the individual franchisee.
3. By gaining control of the real estate and building, McDonald's could exercise control over the franchisee by making him a tenant. Licensees not abiding by the terms of the franchise agreement could be evicted. Among the terms, the franchisees were on a "net net" basis, meaning they were responsible for paying property insurance and taxes.

Reinterpreting the Numbers

FRC came into existence by leasing the land and owning the building, and then charging rent on both from the licensee. But at the time McDonald's was cash poor (Kroc's Multimixer business and his own franchise sustained him during this period), and Sonneborn was already making plans to buy the land as well. At this time, there was a flight

of city dwellers to the suburbs, and many of the sites McDonald's sublet to franchisees appreciated rapidly. But, as stated earlier, banks are reluctant to provide loans for restaurants due to their high failure rate, and given McDonald's anemic balance sheet and income statements, banks would be equally reluctant to lend them money.

In 1958 Sonneborn hired Richard Boylan, an eight-year veteran of the IRS who specialized in real estate accounting, appraisal and taxation.

Boylan beefed-up McDonald's balance sheet by using IRS valuation techniques to increase the company's reported net worth by extending an interpretation used in estate appraisal. The IRS had determined that the future lease payments to a deceased's estate had a present value. Using this rule, Boylan concluded that McDonald's future net rental income from its franchisees had a present value as well, and that should be reported as an asset — assessed at roughly 10 times what McDonald's collected in rents from franchisees. This also reflected the effect of appreciating real estate values that McDonald's was creating through the future income stream that grew every time McDonald's opened a new unit and subleased the property. By capitalizing the leases in this manner, by 1960 McDonald's could proudly boast a balance sheet with total assets of $12.4 million, impressive enough for major lending institutions to provide multi-store financing packages.

Boylan performed an encore with McDonald's reported earnings which were equally low ($12,000 in 1958) because the costs related to building new units showed up on their financial documents before new restaurant-generated revenues.

Traditionally, a company expenses real estate development costs as they are incurred, but Boylan argued that they should be reported nine months later, when the expenses could then be matched to the revenues they generate. His reasoning was that it took this much time to develop a site, and real estate expenses did not generate revenues until new stores were open. Boylan also convinced Sonneborn to capitalize interest expenses on real estate loans during the construction of a store and amortize those costs over the 20-year life of a franchise. Both of these techniques were designed to delay the reporting of expenses during a time when McDonald's was building units as quickly as new franchisees were found to operate them. As a side benefit, the delaying of expenses would help generate an income statement that reported earnings when ordinarily there wouldn't be any.

The Buy Out

By 1961 Kroc felt he was doing all the work of creating a hamburger chain and the McDonald brothers had not contributed anything (except for devising the original Speedee System). Every time he needed to make a format or procedural change, he required their written permission, and they were often lackadaisical in their responses. Finally Kroc called them and asked how much it would take to buy them out?

The response nearly gave him a stroke, "We want $2.7 million, which would leave us one million each after taxes."

Kroc swore, but he knew if he wanted complete control he had to capitulate. At the time there were 228 units with sales the year before of $37.8 million. Of that the brothers had received 0.5% (or $189,000) representing their royalty. A New York money manager arranged a loan from several college endowment and pension funds, along with a $1.5 million loan from State Mutual, which accepted the risk in exchange for 20% of McDonald's stock.

Today, with system-wide sales of over $61 billion, if both Ray Kroc and the McDonald brothers had been more flexible with their franchise agreement, the royalty paid to the McDonald brothers (or their heirs) would be $305 million! **$**

Notes

1. After the *American Restaurant* magazine article appeared, the brothers were besieged with inquiries about their operation. Within two years the brothers sold 15 franchises to their "Speedee System" for a one-time fee of $1,000 which included the store plans and a description of their system. No further assistance or support was given.
2. This was not the first place Ray Kroc tried to obtain a national franchise agreement. In 1949, on West Pico Boulevard in Los Angeles, Kroc made an offer to the owners of The Apple Pan, a restaurant known for their hickory flavored hamburgers, tuna salad sandwiches, and apple and pecan pies, but the owners turned him down. Carl Karcher, founder of Carl's Jr., said that at one point Kroc had extended a similar offer to him before he went into the hamburger business when he owned a few hot dog stands and barbecues.
3. To this day, McDonald's does not hold an equity position in any of the suppliers it does business with. Aside from establishing the operating procedures individual franchisees are required to follow, McDonald's Incorporated also establishes for its suppliers the recipes for every item of food they sell or use, and the specifications for quality. Even the recipe for the brine used to cure cucumbers into pickles was devised by McDonald's.

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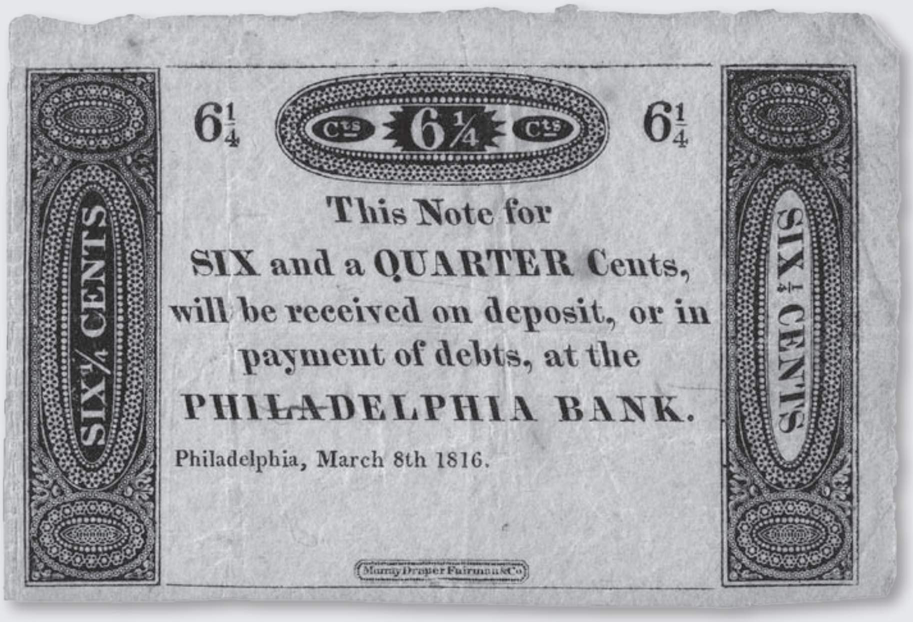
EARLY CORPORATE AMERICA



Museum of American Finance

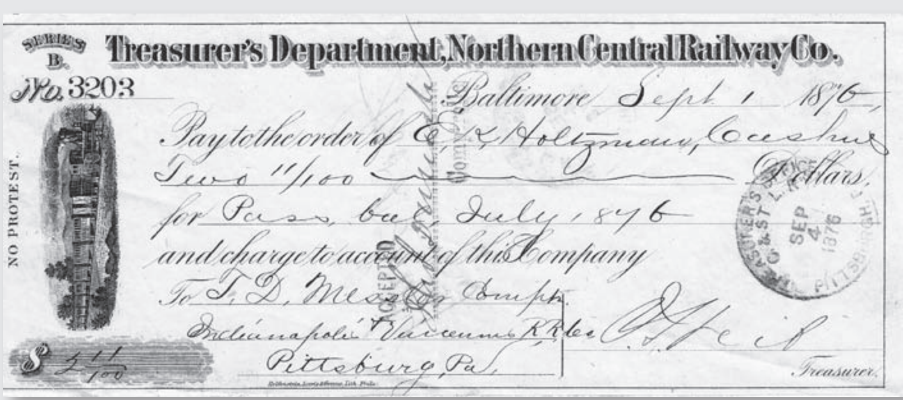
1816

Six and a quarter cent Philadelphia Bank note dated March 8, 1816. The bank was the seventh largest US corporation at the time.

1836

Stock certificate for 95 shares in the Bank of Kentucky, which was among the nation's 25 largest corporations in 1816 and 1836.

Museum of American Finance



Museum of American Finance

1856

Check issued by the Northern Central Railroad Company, which was the nation's 16th largest corporation in 1856.

The Largest Industries and Companies Before 1860

By Richard Sylla and Robert E. Wright

Although the United States drew on European precedents to guide much of its early financial maturation, in one area it led the way: the development of the corporation as an important form of competitive business enterprise. Early European corporations were few, far between and usually monopolies. Examples include the Bank of England, which had a monopoly of corporate banking in England and Wales into the 1850s, and the East India Company, which enjoyed a monopoly of British trade with India until well into the 19th century.

When Britain began in 1844 to register joint-stock companies (which did not even enjoy limited liability), fewer than a thousand registering companies reported having existed before that date. In 1856, when Britain finally allowed limited liability, companies that immediately qualified were still fewer than a thousand. France chartered only 642 corporations before 1867. Prussia, the principal German state before modern Germany emerged in 1871, had even fewer corporations than Britain and France.

In contrast, our recent research documents that the United States chartered more than 13,000 corporations by 1850, and at least twice that many by 1860. Not all of these corporations survived, of course, but probably at least a third of them did. If so, the US had many more corporations in operation than any other country by the mid-19th century, and perhaps more than all other countries put together. The US was the first "corporation nation," and the comparatively easy access American entrepreneurs had to the corporate form likely contributed greatly to the country's rapid economic growth after 1790.

Most early US corporations were created by individual acts of state legislatures. Two, the first and second Banks of the United States, were created by acts of Congress. With grants from the National Science Foundation and others, we supervised a team of research assistants who went through the thousands of pages of state session laws to create a database of all the corporations that states chartered. Among other details, the database contains each company's state and date of incorporation, its line of business and its minimum and maximum authorized capital.

We found that the states had chartered 22,419 corporations by special legislative acts before 1861, and several thousand more, mostly in the 1840s and 1850s, under general acts that allowed corporations to be formed in the modern way, by applying to an administrative officer of state government instead of inducing the legislature to pass a special act.

One recent use of our database was to write a blog post on the "Fortune 500" of 1812, timed to appear around the time of *Fortune* magazine's "Fortune 500" issue of 2012.[1] Since 1955, *Fortune* has reported each year on the 500 largest American companies ranked by revenue.

Lacking information on revenues, we used authorized capitalization to come up with our 1812 rankings. For that year, 23 of the 25 largest corporations were banks. The other two were John Jacob Astor's American Fur Company and the New York Manufacturing Company. In all, by 1812, the US had chartered 1,440 corporations.

The overwhelming importance of banks 200 years ago is an indication of the success of the US financial revolution launched two decades earlier by Alexander Hamilton and the Federalists during the first Washington administration. Besides encouraging banking and corporate development, the financial revolution also restructured the national debt on a solid basis, confirmed the specie dollar as the country's monetary base, founded the

RANKING OF STATES WITH THE MOST CHARTERED CORPORATIONS IN THE TOP 500: 1816, 1836 AND 1856

	1816		1836		1856	
State	Rank	No. of corps.	Rank	No. of corps.	Rank	No. of corps.
MA	1	170	2	68	7	31
NY	2	88	1	80	5	36
PA	3	81	3	59	2	44
MD	4	51	4	51	4	43
VA	5	19	8	17	9	27
NJ	6	17				
RI	7	17				
CT	8	13				
OH	9	12	5	37	3	44
NC	10	6				
GA			6	23	6	31
LA			7	21	10	22
AL			9	17		
SC			10	14		
KY					1	47
MO					8	29
Total		474		387		354
% of 500		95%		77%		71%

1816

TOP 25 US CORPORATIONS, 1816

State	Date of Charter	Name of Corporation	Min. Authorized Capital	Max. Authorized Capital	Sector
NY	1812	Bank of America	$6,000,000	$6,000,000	Financial
MA	1811	State Bank	$3,000,000	$4,500,000	Financial
NY	1812	City Bank of New York	$2,000,000	$2,000,000	Financial
VA	1812	Farmers Bank of Virginia	$2,000,000	$2,000,000	Financial
NY	1799	Manhattan Company	$2,000,000	$2,000,000	Financial
PA	1804	Philadelphia Bank	$2,000,000	$2,000,000	Financial
NY	1811	Union Bank in the City of New York	$1,800,000	$1,800,000	Financial
NC	1810	State Bank of North Carolina	$1,600,000	$1,600,000	Financial
MA	1814	Manufacturers and Mechanics Bank	$1,500,000	$2,000,000	Financial
GA	1815	Bank of the State of Georgia	$1,500,000	$1,500,000	Financial
VA	1804	Bank of Virginia	$1,500,000	$1,500,000	Financial
MD	1812	City Bank of Baltimore	$1,500,000	$1,500,000	Financial
NY	1810	Mechanics Bank in the City of New York	$1,500,000	$1,500,000	Financial
PA	1809	Farmers' and Mechanics' Bank	$1,250,000	$1,250,000	Financial
NY	1805	Merchants' Bank, in the city of New York	$1,250,000	$1,250,000	Financial
MA	1812	Boston Bank	$1,200,000	$1,800,000	Financial
MD	1805	Farmers Bank of Maryland	$1,200,000	$1,200,000	Financial
NY	1812	New York Manufacturing Company	$1,200,000	$1,200,000	Manufacturing
MA	1813	New-England Bank	$1,000,000	$1,500,000	Financial
KY	1806	Bank of Kentucky	$1,000,000	$1,000,000	Financial
NY	1812	Bank of Utica	$1,000,000	$1,000,000	Financial
MD	1810	Commercial and Farmers Bank of Baltimore	$1,000,000	$1,000,000	Financial
PA	1814	Commercial Bank of Pennsylvania	$1,000,000	$1,000,000	Financial
NY	1814	Globe Insurance Company	$1,000,000	$1,000,000	Financial
MD	1806	Mechanics' Bank of Baltimore	$1,000,000	$1,000,000	Financial

TOP 500 US CORPORATIONS, NUMBER AND CAPITALIZATION BY INDUSTRIAL SECTOR, 1816

Sector	Number	MINAC	MAXAC	% total	% total	% total
Construction	0	$0	$0	0.00%	0.00%	0.00%
Extractive	10	$3,390,000	$4,290,000	2.00%	2.05%	2.21%
Financial	280	$117,530,000	$138,580,000	56.00%	70.95%	71.46%
Manufacturing	141	$30,045,000	$30,795,000	28.20%	18.14%	15.88%
Service	3	$1,200,000	$2,700,000	0.60%	0.72%	1.39%
Transportation	65	$13,245,846	$17,306,957	13.00%	8.00%	8.92%
Utility	1	$250,000	$250,000	0.20%	0.15%	0.13%
Totals	500	$165,660,846	$193,921,957	100.00%	100.00%	100.00%
Averages		$331,322	$387,844			

1836

TOP 25 US CORPORATIONS, 1836

State	Date of Charter	Name of Corporation	Min. Authorized Capital	Max. Authorized Capital	Sector
US	1816	Bank of the United States	$35,000,000	$35,000,000	Financial
LA	1833	Citizens' Bank of Louisiana	$12,000,000	$12,000,000	Financial
NY	1832	New York and Erie Rail Road Company	$10,000,000	$10,000,000	Transportation
LA	1832	Union Bank of Louisiana	$7,000,000	$7,000,000	Financial
NY	1812	Bank of America	$6,000,000	$6,000,000	Financial
VA	1824	Chesapeake and Ohio Canal Company	$6,000,000	$6,000,000	Transportation
LA	1835	New Orleans and Nashville Rail Road	$6,000,000	$6,000,000	Transportation
LA	1835	New Orleans Gas Light and Banking Company	$6,000,000	$6,000,000	Utility
SC	1835	Cincinnati and Charleston Railroad Company	$6,000,000	$6,000,000	Transportation
SC	1836	South-Western Rail Road Bank	$6,000,000	$6,000,000	Financial
VA	1832	James River and Kanawha Company	$5,000,000	$5,000,000	Transportation
KY	1834	Bank of Kentucky	$5,000,000	$5,000,000	Financial
TX	1836	Texas Rail Road, Navigation, and Banking Company	$5,000,000	$5,000,000	Financial
LA	1824	Bank of Louisiana	$4,000,000	$4,000,000	Financial
OH	1836	Ohio Railroad Company	$4,000,000	$4,000,000	Transportation
MA	1830	Massachusetts Rail Road Corporation	$3,500,000	$3,500,000	Transportation
IL	1836	Wabash and Mississippi Rail Road Company	$3,000,000	$5,000,000	Transportation
MO	1836	Missouri Iron Company	$3,000,000	$5,000,000	Extractive
MA	1811	State Bank	$3,000,000	$4,500,000	Financial
ME	1821	State Bank	$3,000,000	$3,000,000	Financial
MD	1827	Baltimore and Ohio Rail Road Company	$3,000,000	$3,000,000	Transportation
MD	1832	Delaware and Maryland Rail Road Company	$3,000,000	$3,000,000	Transportation
NY	1832	New York and Albany Rail Road Company	$3,000,000	$3,000,000	Transportation
NY	1832	Lake Champlain and Ogdensburgh Rail Road Company	$3,000,000	$3,000,000	Transportation
LA	1833	Commercial Bank of New Orleans	$3,000,000	$3,000,000	Utility

TOP 500 US CORPORATIONS, NUMBER AND CAPITALIZATION BY INDUSTRIAL SECTOR, 1836

Sector	Number	MINAC	MAXAC	% total	% total	% total
Construction	2	$2,500,000	$2,500,000	0.40%	0.43%	0.36%
Extractive	18	$17,000,000	$20,000,000	3.60%	2.93%	2.87%
Financial	213	$259,225,000	$305,875,000	42.60%	44.63%	43.95%
Manufacturing	51	$37,350,000	$39,030,000	10.20%	6.43%	5.61%
Service	6	$3,700,000	$6,200,000	1.20%	0.64%	0.89%
Transportation	203	$248,495,000	$308,401,666	40.60%	42.79%	44.31%
Utility	7	$12,500,000	$14,000,000	1.40%	2.15%	2.01%
Totals	500	$580,770,000	$696,006,666	100.00%	100.00%	100.00%
Averages		$1,161,540	$1,392,013			

1856

TOP 25 US CORPORATIONS, 1856

State	Date of Charter	Name of Corporation	Min. Authorized Capital	Max. Authorized Capital	Sector
WI	1856	Northern Pacific Railroad Company	$100,000,000	$150,000,000	Transportation
NY	1853	Atlantic and Pacific Railroad Company	$100,000,000	$100,000,000	Transportation
LA	1855	Southern Pacific Railroad Company	$100,000,000	$100,000,000	Transportation
MN	1853	Lake Superior, Puget's Sound and Pacific Railroad Company	$50,000,000	$100,000,000	Transportation
MN	1856	Minneapolis and St. Cloud Rail Road Company	$20,000,000	$30,000,000	Transportation
PA	1844	Pennsylvania Canal and Railroad Company	$20,000,000	$20,000,000	Transportation
TX	1853	Mississippi and Pacific Railroad	$20,000,000	$20,000,000	Transportation
LA	1833	Citizens' Bank of Louisiana	$12,000,000	$12,000,000	Financial
VA	1846	Richmond and Ohio Railroad Company	$12,000,000	$12,000,000	Transportation
NY	1832	New York and Erie Rail Road Company	$10,000,000	$10,000,000	Transportation
MO	1849	Pacific Railroad	$10,000,000	$10,000,000	Transportation
MN	1854	Minnesota and North Western Railroad Company	$10,000,000	$10,000,000	Transportation
NC	1837	South Western Rail Road Bank	$8,000,000	$12,000,000	Financial
LA	1853	New Orleans, Jackson and Great Northern Railroad Company	$8,000,000	$8,000,000	Transportation
PA	1854	Northern Central Railway Company	$8,000,000	$8,000,000	Transportation
PA	1846	Pennsylvania Railroad Company	$7,500,000	$10,000,000	Transportation
LA	1832	Union Bank of Louisiana	$7,000,000	$7,000,000	Financial
OH	1845	State Bank of Ohio	$6,150,000	$6,150,000	Financial
NY	1812	Bank of America	$6,000,000	$6,000,000	Financial
VA	1824	Chesapeake and Ohio Canal Company	$6,000,000	$6,000,000	Transportation
LA	1835	New Orleans Gas Light and Banking Company	$6,000,000	$6,000,000	Utility
SC	1835	Cincinnati and Charleston Railroad Company	$6,000,000	$6,000,000	Transportation
SC	1836	South-Western Rail Road Bank	$6,000,000	$6,000,000	Financial
MO	1851	North Missouri Railroad Company	$6,000,000	$6,000,000	Transportation
MO	1851	St. Louis and Iron Mountain Rail Road Company	$6,000,000	$6,000,000	Transportation

TOP 500 US CORPORATIONS, NUMBER AND CAPITALIZATION BY INDUSTRIAL SECTOR, 1856

Sector	Number	MINAC	MAXAC	% total	% total	% total
Construction	10	$17,400,000	$21,400,000	2.00%	1.16%	1.14%
Extractive	25	$63,000,000	$69,500,000	5.00%	4.21%	3.71%
Financial	90	$190,700,000	$214,680,000	18.00%	12.75%	11.45%
Manufacturing	23	$30,100,000	$36,900,000	4.60%	2.01%	1.97%
Service	3	$3,500,000	$5,500,000	0.60%	0.23%	0.29%
Transportation	341	$1,169,250,000	$1,502,399,998	68.20%	78.18%	80.12%
Utility	8	$21,700,000	$24,700,000	1.60%	1.45%	1.32%
Totals	500	$1,495,650,000	$1,875,079,998	100.00%	100.00%	100.00%
Averages		$2,991,300	$3,750,160			

first central bank and saw the emergence of modern securities markets and stock exchanges in major cities. The finance sector (banks and insurance companies) dominated the entire 1812 list, making up 44% of the 500 largest companies and 72% of all authorized capital. US economic growth was fueled from the start by a modern financial system that made short- and long-term credit widely available to American entrepreneurs.

Here we report on America's 500 largest corporations at three dates: 1816, 1836 and 1856. These snapshots of corporate America two decades apart in the antebellum era give us an indication of how the US economy was changing over time. For each date, we report the top 25 corporations ranked by the minimum capital authorized in their respective legislative charters. Another set of tables shows at each of the three dates the industrial distribution of the 500 largest companies and the total and average capital, both minimum and maximum, authorized by charters. The first table shows the top 10 states ranked by the number of corporations in the listing of the 500 largest companies at each date.

1816

The financial sector continued to dominate in 1816, when the total number of corporations chartered reached 2,087. More than half of the top 500 companies (280) were in this sector, and they had an even larger share (71%) of authorized capital. Manufacturing was the next largest sector, with 141 companies (28% of the top 500), but a decidedly smaller share of minimum authorized capital (18%). The embargo of 1808 and the War of 1812 had made it difficult for Americans to import manufactures from Europe. That encouraged many American entrepreneurs to launch manufacturing startups, mostly in two states. Massachusetts had 91 of the 141 manufacturing firms, and New York had 34.

Massachusetts and New York also ranked first and second in terms of total corporations in the top 500, with 170 and 88 corporations, respectively. Thus, more than half of the largest US corporations in 1816 were in these two states. Two more states were well represented: Pennsylvania with 88 of the top 500 and Maryland with 51. Nearly four out of five of the largest companies were in these four states.

Focusing on the 25 largest companies in 1816, we find the financial sector's striking dominance. On the list are 23 banks, one insurance company and one manufacturing enterprise. The largest company in 1816 has a name familiar today: Bank of America. But that is misleading because the 1816 company was a New York bank chartered in 1812; it is not an ancestor of the company with the same name in 2012. That is not the case, however, with two other companies in the top 25. The third largest company is the City Bank of New York, which is the ancestor of today's Citibank/Citigroup. Also founded in 1812, Citibank is celebrating its 200th anniversary this year. Both of these New York banks were founded to replace the banking facilities lost when Congress refused in 1811 to re-charter the Bank of the United States, which had a large branch in New York City. The fifth largest company in 1816, the Manhattan Company, is the oldest ancestor of today's JPMorgan Chase Bank.

Interestingly, the "Fortune 500" of 2012 shows that both JPMorgan Chase and Citigroup remain in the top 25 largest US corporations.

1836

The big change from 1816 in the top 500 companies of 1836 is that the transportation sector pulled even with finance. Finance continued to be a major sector of the corporate economy, but the railroad age had arrived and a lot of corporate capital had also been invested by canal companies. Of the top 500 companies, 213 were in finance and 203 in transportation, so these two sectors represented about five-sixths of the largest corporations. Each sector had about 43–44% of the total capital of the top 500, implying that about seven of every eight dollars of capital invested in America's largest companies went to finance and transportation enterprises.

There were only 51 manufacturing enterprises in the top 500 in 1836, as compared with 141 in 1816. Yet we know that America's industrialization was better established by 1836 than it had been in 1816. Is this a puzzle? Not really. The average capital (minimum authorized) of a top 500 company in 1816 was only $331,000; by 1836, it was $1.16 million. Most manufacturing firms did not require as much capital as canals and railroads did. So when large transportation enterprises began to enter the top 500 in the two decades from 1816 to 1836, they displaced the smaller manufacturing firms. Large-scale enterprises in manufacturing would not arrive in America until after the Civil War.

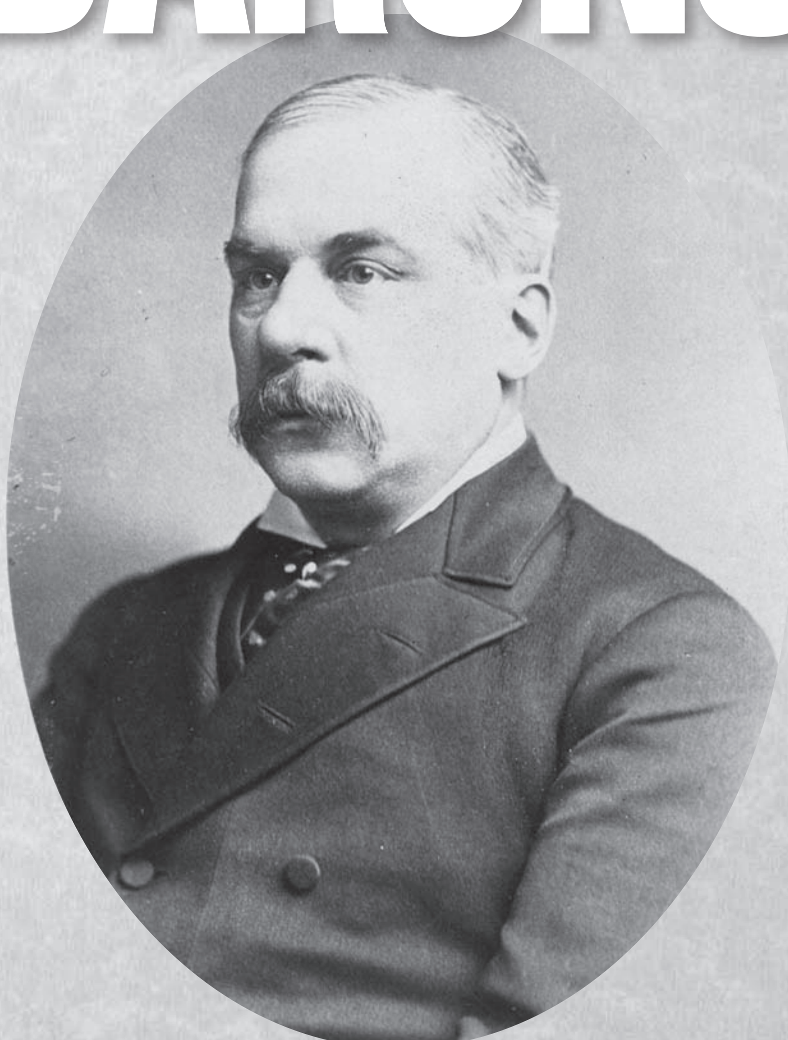
The four states with the most corporations in the top 500 were the same in 1836 as in 1816. New York, with 80 companies, replaced Massachusetts (68) as the leader, followed by Pennsylvania (59) and Maryland (51). But the share of these leading states declined, from nearly 80% of the top 500 in 1816 to just over half of the top 500 in 1836. The number of US states was increasing, and all of them needed transportation companies to move their products to markets. By 1836, the US states had chartered a total of 7,463 companies.

Turning to the top 25 corporations in 1836, the overwhelming importance of finance and transportation is evident, as is the balance of the two leading sectors. Banks make up 12 of the top 25, railroads 10, and canal companies two. The only non-bank, non-transportation enterprise on the list is the Missouri Iron Company, a manufacturing concern that had just been chartered in 1836.

By far the largest enterprise in the country was the second Bank of the United States, which had been chartered by Congress in 1816. Andrew Jackson vetoed Congress's attempt to renew the bank's charter in 1832, so in 1836 it was in the process of converting itself to a Pennsylvania-chartered bank. The second and fourth largest companies were Louisiana banks, an indication of the importance of the cotton economy of the South and rivalry between the ports of New Orleans and New York. The third largest company was the Erie Railroad, later to become famous as the "Scarlet Woman of Wall Street" after it had been taken over, and its stock manipulated, by Daniel Drew, Jay Gould and Jim Fiske.

Another interesting feature of the top 25 companies is the presence of what might be called three hybrids: Louisiana's New Orleans Gas Light and Banking Company; South Carolina's South-Western Rail Road Bank; and Texas's Texas Rail Road, Navigation and Banking Company. These hybrids indicate that states with less-developed banking systems and capital markets than, say, New York, » *continued on page 38*

TRACKING SOCIETY'S CHANGING ATTITUDES TOWARDS THE ROBBER BARONS



J.P. Morgan

Collection of the Museum of American Finance.

By Michael A. Martorelli

Many contemporary commentators believe executives associated with AIG, Bear Stearns, Fannie Mae, Goldman Sachs, et al. deserve to be labeled modern Robber Barons and excoriated for their offenses against society. That such a derisive term has remained in the lexicon for more than a century suggests an enduring interest in the 19th century businessmen who "earned" that title.

Throughout the past 140 years, journalists, novelists and other writers have been just as industrious as academic historians and professional biographers in scrutinizing the alleged misdeeds of men with names such as Carnegie, Gould, Morgan, Rockefeller and Vanderbilt. Their writings over more than a century have shaped society's changing attitudes towards those men and their peers. In that time, the consensus opinion has alternately chastised those industrialists for acting solely in their own self-interests and praised them for transforming the United States into a powerful economic force. Most published commentaries have revealed much about the viewpoint of the author and his or her time, while uncovering little, if any, new evidence about the Robber Barons' actions or motives.

The First Drafts of History

The first chroniclers of the activities of America's Robber Barons were not historians, but journalists and writers. The earliest comment on their unfair, unscrupulous and unseemly business activities appeared in 1859, when *New York Times* editor Henry J. Raymond compared Cornelius Vanderbilt to the medieval German barons who extracted tribute from all passengers sailing down the Rhine River. In 1869, E.L. Godkin, editor of *The Nation* magazine, reiterated that notion. Just two years later, Charles Francis Adams and Henry Adams detailed numerous occasions of corporate malfeasance by Jay Gould and other unscrupulous businessmen in *Chapters of Erie and Other Essays*. And in 1894, Henry Demarest Lloyd peppered his *Wealth Against Commonwealth* with numerous descriptions of monopolies, corners, combinations and other tools used by industrialists to gain unfair competitive advantages.

During the first few years of the 20th century, Ida Tarbell published a scathing

19-part series on "The History of the Standard Oil Company" in *McClure's Magazine* and compiled those disapproving articles into a book of the same name. In 1910, Gustavus Myers included stories about the shenanigans of Andrew Carnegie, James Duke, JP Morgan and John D. Rockefeller, Sr. in his *History of the Great American Fortunes.* Meanwhile, throughout the period 1872 to 1916, editorial cartoonists such as Thomas Nast, Udo Keppler and Frederick Burr Opper filled the pages of publications such as *Harper's Weekly*, *Puck Magazine* and *The Wasp* with biting caricatures of the most prominent businessmen and politicians of the day.

None of the most prolific authors or illustrators of the period were trained historians. Yet, their lack of academic schooling did not prevent them from influencing the attitudes of the nation's *literati,* as well as its ordinary citizens, towards their subjects. Conditions in the United States at that time certainly seemed to support those writers' negative attitudes towards the country's leading businessmen.

Only 17 of the 50 years from 1865 to 1914 showed all the expected signs of economic prosperity. Thus, for about two-thirds of the time between those years, portions of the American economy were suffering some degree of financial distress. Since the country had neither a national bank nor laws providing individuals with a safety net in times of business downturns, it is likely the amount of personal suffering was great. Throughout those years, it was obvious that economic dislocations among laborers were commonplace; many of those problems must have seemed directly connected to the concomitant accumulation of wealth by a small group of business owners and managers.

Ordinary Americans did not begrudge the most successful among them their accumulated wealth, as long as they perceived that such wealth had been obtained via open, fair competition on a level playing field. The early accounts of the unseemly and anti-competitive business tactics employed by men such as Daniel Drew and Jay Gould struck a nerve, and began to convince those ordinary Americans of a new reality, i.e. one in which their inability to gain the ultimate level of economic prosperity was not due to any personal failing, but to the abuse of the system by a small group of scoundrels.

Magazine writers responded to the initial interest in their work and extended their investigation and publication of such abuses. Novelists also picked up the public interest in the economic excesses of the age. Critiques of unfettered capitalism and its consequences became quite popular.

In 1899 sociologist and economist Thorstein Veblen provided perhaps an unintentional but nonetheless appropriate capstone to the era with the publication of *The Theory of the Leisure Class.* It was a biting satire about the excess waste exhibited by some during the period christened *The Gilded Age* in the 1873 novel of that name by humorist and satirist Mark Twain and his collaborator Charles Dudley Warner. Veblen coined the phrases "conspicuous consumption" and "conspicuous leisure." While he did not refer directly to any particular personages of the day, Veblen certainly influenced those who wrote disapprovingly about the excesses visible in the homes, art collections and other extravagances of the Robber Barons.

Reactions in the Next Generation

The pace of anti-business criticism slowed after World War I. Observers from many quarters appeared to appreciate the accomplishments of industry in supplying the material necessary for the war. In addition, the passage of anti-trust laws and court decisions ordering the break-up of monopolies and trusts helped correct many of the most visible corporate abuses. In the midst of the Great Depression, however, several books brought the tales of the Robber Barons to a broader audience, thus extending and reinforcing the negative attitudes towards their alleged misdeeds.

In 1934, Matthew Josephson emblazoned the Robber Baron title in history with his publication of *The Robber Barons: The Great American Capitalists 1861-1901.* In a few telling sentences in the forward, he noted "the great inherent contradiction" that occurred as these influential businessmen "…organized and exploited the resources of the nation…" while causing "…much disaster, outrage and misery…." In a chapter entitled "The Robber Barons," Josephson called special attention to their use of divine providence to justify their successes, as well as their frenzied and ostentatious displays of consumption and outward wealth.

Just two years later, The Modern Library published an updated edition of Gustavus Myers' *History of the Great American Fortunes*. In the new edition, Myers added an epilogue describing some disturbing activities of his central characters and their companies subsequent to 1910. Publishing this additional information added fuel to the long-smoldering and newly-emergent anti-Robber Baron fire.

Josephson, Myers and their anti-businessman peers and predecessors were writers. Charles Beard and Vernon Louis Parrington were historians. Two works by those men demonstrated that the community of professional historians also held a poor opinion of the activities of Messrs. Carnegie, Rockefeller, et al. In 1927, Beard and his wife Mary co-authored *The Rise of American Civilization*. In that same year, Parrington wrote *Main Currents in American Thought*. Both were general histories; neither focused particular attention on the businessmen of the Gilded Age. Yet, both authors demonstrated their anti-business sentiment by repeatedly using words and phrases such as *ruthless, predatory, barons of business* and *the new capitalist baronage* in their purportedly objective analysis of that period. Fellow historian Richard Hofstadter traced the rationale for those views to the "discontented professoriat of the Progressive Era." W. Woodruff regarded their disdain as emblematic of his idea that most of that era's writing about the country's economic, social and political institutions explored only "…the degenerative and corrosive influences of a business civilization."

Upon Further Review

As conditions in the economy changed again in the post-World War II period, historians and other writers began to revisit the contributions to the American economic machine made by the leading businessmen of the Gilded Age. Many reinterpretations of their activities were undertaken by scholars who were part of Harvard University's Research Center for Entrepreneurship. Formed in 1948, that center was just one manifestation of an interest in the history of entrepreneurship, or more broadly, business leadership. Those economic historians sought not just to characterize business captains as rapacious money-grubbers, but to better understand their *raison d'etre* as well as the

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Investigative journalist Ida M. Tarbell at her desk in 1921. Tarbell was a chronicler of American industry and was most famous for her classic *The History of the Standard Oil Company*.

totality of their contributions to society.

In 1949, DC Heath broke new ground in suggesting a rethinking of one Robber Baron's activities with its publication of *John D. Rockefeller: Robber Baron or Industrial Statesman?* In his introduction to that collection of essays, editor Earl Latham raised several questions that a study of Rockefeller's career should address. By no means was this book an apologia for Rockefeller's actions. It included both diatribes and more favorable commentaries. In "Suggestions for Additional Reading," Latham referred the reader to more than two dozen works of history, opinion and fiction to judge for himself the ultimate answer to the question posed by the book's title.

In a 1950 article in the *Pennsylvania Magazine of History and Biography*, Thomas C. Cochran expressed the views of the aforementioned entrepreneurial school in addressing "The Legend of the Robber Barons." The article questioned the accuracy and appropriateness of that label. As an example, Cochran profiled investor and railroad entrepreneur Henry Villard, and detailed "…the most interesting differences between the dramatic 'Robber Baron' explanation of Villard's activities and the more sober and socially complex explanation offered by entrepreneurial history."

Throughout the 1950s many historians challenged the continuing use of the "Robber Barons" phrase to describe the business leaders of the late 19th century. A 1954 issue of *The Saturday Review* titled an article "Should American History Be Rewritten?" It featured essays by Allan Nevins answering "yes" and Matthew Josephson saying "no." Both discussed the indiscriminate use of the Robber Baron term as well as the justification for applying it.

Also during that decade, three *Business History Review* articles were representative of the positive tone running through that academic journal. In 1956, W. Woodruff's "History and the Businessman" discussed the absence of perspective both by those who insisted on using the Robber Baron term and those who preferred to go to another extreme and describe those men as "architects of material greatness." Two years later, in "The Robber Baron Concept in American History," Hal Bridges traced "…the origins, spread and obsolescence of the concept...together with the merits and failings of currently pre-dominant historical attitudes." And in the closing year of the decade, John Tipple wrote "The Anatomy of Prejudice," which explored the origins of the Robber Baron legend. He tied the creation of that stereotype to an attempt to explain the significant shift in the economic structure of the country that occurred in the last third of the 19th century.

During the following few decades, neither historians nor other writers had much to say about the Robber Barons. The writings that did appear maintained the rather positive tone discussed above. Edward Kirkland's 1960 article in *The American Historical Review* titled "The Robber

Barons Revisited," Thomas B. Brewer's 1970 compilation *The Robber Barons: Saints or Sinners* and Burton W. Folsom's 1987 book *The Myth of the Robber Barons* were representative of that attitude.

Some Modern Viewpoints

The years preceding and following the turn of the 20th century into the 21st saw an explosion of 100-year anniversary books by historians, biographers and other writers. Many discussed the activities of the Robber Barons. Biographers such as Ron Chernow, David Nasaw and Jean Strouse produced landmark studies of John D. Rockefeller, Sr., Andrew Carnegie and J.P. Morgan, respectively. Historian Maury Klein added books on Jay Gould and E.H. Harriman.

Based on the number of favorable reviews, these writers were successful at presenting balanced, well-documented pictures of their subjects. None offered the type of half-true polemic written by the likes of Ida Tarbell or other muckrakers. Moreover, unlike several highly-flawed hagiographies published in the early part of the 20th century, none of these works suggested that the central character's impressive business accomplishments or extensive charitable contributions should obscure the record of their less admirable actions. Each author used newly-available resources to discuss the good deeds as well as the unethical and/or illegal activities of the protagonist.

Other writers and historians described the activities of specific Gilded Age businessmen in non-fiction books covering a broader theme or time period. All but a few of almost two dozen such works presented straightforward accounts of the Robber Barons' activities. The historians seemed particularly intent on placing those actions in the context of their times; most non-fiction writers cited their intention of helping modern readers understand and appreciate the business conditions at the end of the 19th century even as those readers were digesting the eerily-similar newspaper accounts of business excesses in the late 20th and early 21st centuries.

Given the reality of corporate disasters involving firms such as Enron, Tyco and WorldCom, it was not surprising to see many writers remind their readers of the continuing applicability of the Robber Baron label, even as others railed against the often irresponsible use of that term in many American compositions. The collective efforts of all these authors illuminated for a new generation the core questions surrounding the motives and the nature of the original Robber Barons' activities.

As expected, the financial crisis of 2008–2009 spurred the publication of another flurry of books excoriating the people referred to earlier as "Modern Robber Barons." At the same time, an outpouring of television programs, magazine articles, op-ed pieces and blog posts reminded the public that the 1987 "Greed is Good" credo of the fictional Gordon Gekko was still firmly entrenched throughout American business. As usual, journalists, editorialists and other commentators jumped into the "analysis and characterization" business many years before most academic historians have had a chance to thoroughly research the happenings of the era and produce their own analyses of the players' activities.

What Does it All Mean?

The 19th century businessmen labeled Robber Barons were highly instrumental in transforming the United States from an agrarian, technologically pedestrian country to an industrial powerhouse. Many of those men employed aggressive, ruthless, immoral and even illegal tactics in the pursuit of corporate profit and individual wealth. Writers discussing their activities have brought to their work not just a dispassionate view of the facts, but a set of personal and temporal baggage that cannot help but have colored their reflections and observations. Historians and serious biographers writing for history have labored hard to provide comprehensive examinations of those who will forever be tarred with the Robber Baron brush. Journalists, columnists and others writing largely for entertainment have been less diligent at seeking such understanding, yet just as influential at perpetuating the Robber Baron legend. $

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Collection of the Museum of American Finance.

Certificate for 10 shares of stock in the Erie Railway Company dated October 13, 1869 and signed by "Robber Baron" Jay Gould as president.

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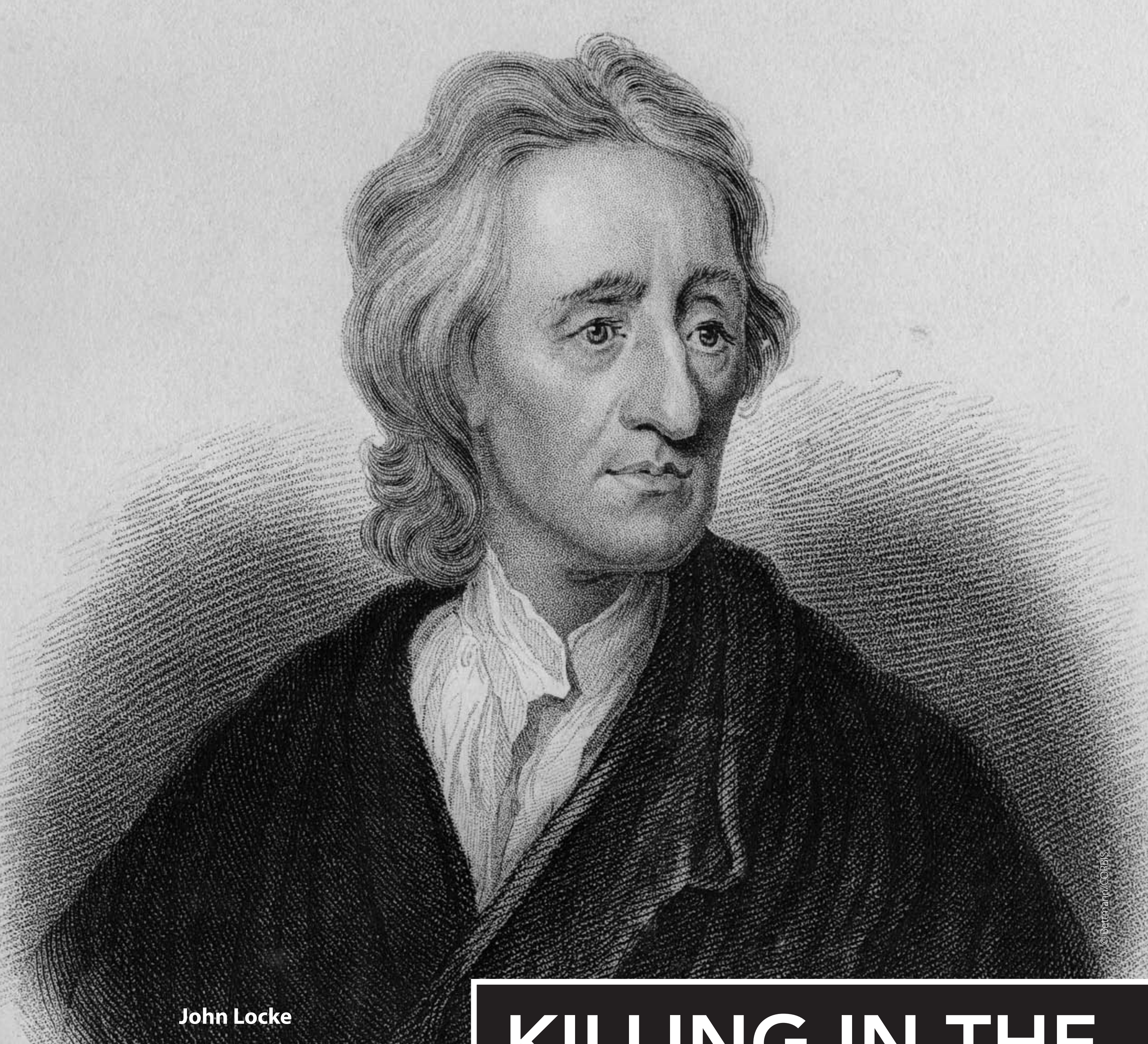


John Locke

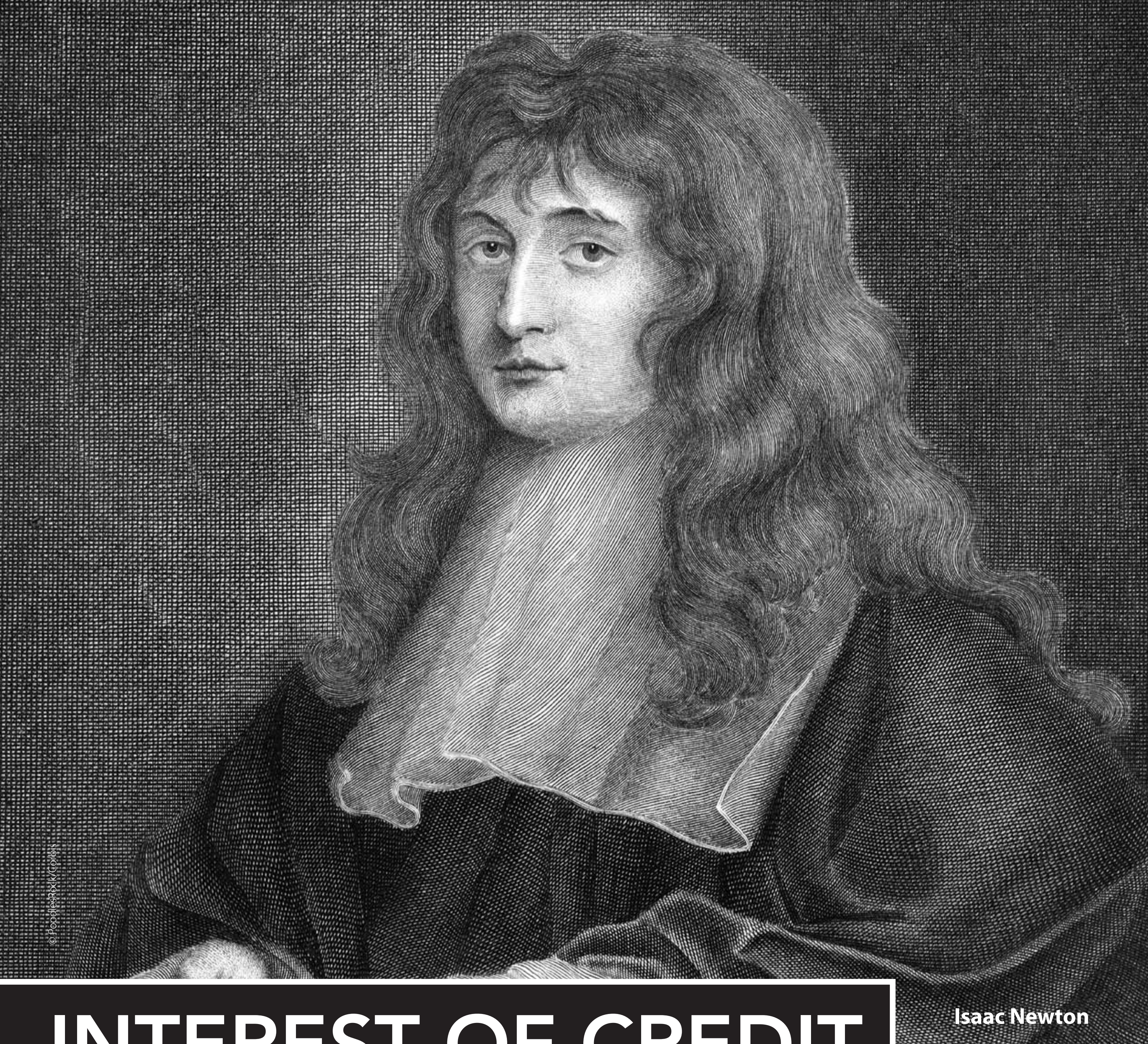
KILLING IN THE

By Carl Wennerlind

The successful launch of the Bank of England in 1694 opened a new chapter in the history of money. The Bank's paper notes—secured by a fractional reserve of silver coin, profits from its banking operations and a stream of interest payments from the government—constituted Europe's first widely-circulating credit currency. Although the Bank's capital stock was subscribed instantaneously and its notes entered circulation smoothly, the Bank's launch coincided with a severe monetary crisis.

Counterfeiting, clipping and coining had substantially eroded the amount of silver in the English coin to the point where it was no longer able to circulate at par. Although such monetary manipulations had been an irritant for centuries, the reduction of the coin's silver content suddenly emerged as a significant threat to England's power and prosperity. John Locke, for example, wrote in a letter in 1696 to the Irish philosopher William Molyneux, "The business of our money has so near brought us to ruin, that… it was every body's talk, every body's uneasiness."

Locke even suggested that the clippers and counterfeiters constituted a



Isaac Newton

INTEREST OF CREDIT

greater threat to England's safety than Louis XIV's military might. The negative impact of a tarnished silver coinage was especially harmful during the ongoing war against France, making it difficult for England to remit funds to its forces fighting on the continent. Yet, even though financing the war was a crucial concern, I argue that the reason why counterfeiting, clipping and coining emerged as such a serious threat to England at this particular moment was because it undermined trust in the nascent Financial Revolution. Since Parliament had opted to institute a bank that issued credit notes on the security of silver coin, instead of other securities like land or merchandise, it was now more important than ever that the coin remained incorruptible and inviolable.

In order for the Bank's notes to circulate widely, people not only had to be able to trust the authenticity of the notes, but also the security assigned to them. Clipping and counterfeiting therefore constituted what philosopher George Caffentzis calls an epistemological crime, in that they introduced "a continuously deepening obscurity into our reality and into our ideas." If confidence in the coin

evaporated, the success of the Bank's notes and indeed the future of the Bank itself would be in jeopardy. Even worse, if the Financial Revolution faltered, the Glorious Revolution would surely fail and England would most certainly face a second Stuart Restoration and an inevitable strengthening of Catholicism.

It was therefore of utmost importance that the integrity of the coin be restored.

John Locke, Isaac Newton and the Counterfeiters

Although Locke was certainly not averse to capital punishment, he did not believe that the hangman alone could put an end to money manipulations. The potential income from clipping and counterfeiting was simply too high. He claimed that "Clipping is so gainful, and so secret a Robbery, that penalties cannot restrain it…Nothing I humbly conceive, can put a stop to Clipping, now it is grown so universal, and Men become so skilful in it, but making it unprofitable."

In Locke's mind, the only method whereby clipping could be made unprofitable was to remint all coin at the old standard and only allow coin to pass by weight while the recoinage was under way. Although it would force people to bring out their scales when conducting business during the interim period before all coins had been reminted, Locke believed that it was the only means whereby the coinage could be fully protected.

Locke also argued that the death penalty was ineffective because the clippers and counterfeiters had lost their respect for the gibbet. It was therefore necessary to restore people's respect, which required a concentrated effort to educate the public about the injuriousness of money manipulations. Locke agreed with the pronouncement of his friend John Pollexfen, that it was necessary to establish "stricter prosecutions…to strike the greatest terrour into such Offenders, that they may no longer be incouraged to go on, by depending upon the favour of Juries, niceties of Law, or hopes of Pardons."

In setting out to correct these problems, Locke followed the prevailing prescription for improving credibility by selecting managers of the highest integrity, expertise and reputation. This led Locke, in conjunction with Charles Montagu, to recruit one of the period's brightest minds, Isaac Newton, to assume the responsibility of the wardenship of the Royal Mint.

Newton's meteoric rise to fame had whetted the Cambridge natural philosopher's appetite for a more dynamic life that only the nation's capital could offer. So when the official invitation came from Montagu in March of 1696, Newton did not hesitate. He left his studies of physics, mathematics, optics and alchemy in Cambridge and dedicated himself to the restoration of the nation's currency, which included the responsibility for investigating, interrogating and prosecuting clippers and organizing the Great Recoinage.

While the wardenship had previously been a sinecure requiring limited involvement, Newton committed himself to the task with the same level of diligence and perseverance that he had famously employed in his scientific investigations. Consonant with the prevailing spirit of empiricism, Newton gathered as much firsthand information as possible, working through the Mint records of the last 200 years.

He refused, as much as possible, to rely on others' testimonies and calculations, and instructed his deputies to trust no "other eyes then your own." Newton spent long hours at the Mint managing a network of agents and informers with whom he cooperated to interrogate and prosecute suspects. There are signs from early on in his tenure, however, that Newton was not entirely pleased with the responsibilities of his new position, and he petitioned the Treasury to relieve him of his duty to prosecute the money offenders. The reason for this petition was neither morality nor compassion. Instead he cited a lack of proper rewards to his office for the detection of counterfeiting operations; the flight of clippers and counterfeiters to the countryside, "where I cannot reach them"; and the juries' lack of confidence in witnesses after the state began offering cash rewards to informants who provided intelligence.

Once his request was denied, however, he spared little effort in carrying out his charge. Newton personally traveled to prisons, taverns and inns — often in disguise — to investigate counterfeiting rings. He methodically investigated his cases and painstakingly interrogated witnesses, employing means that sometimes bordered on torture. Once he had found his man, or woman, he prosecuted his cases with vigor and then, if successful in obtaining a conviction, ruthlessly denied pardons or remissions. For example,

"Clipped" English groat.

when the convicted counterfeiter William Chaloner desperately pleaded to be pardon by Newton — "O dear Sr nobody can save me but you O God my God I shall be murderd unless you save me O I hope God will move your heart with mercy and pitty to do this thing for me" — Newton replied with silence. Chaloner was hanged by the neck at Tyburn two weeks later. Newton's rationale for denying pardons was reportedly that "these dogs always return to their vomit."

Executions had to be highly visible and public in order for the death penalty to serve as a mechanism for deterring prospective clippers and counterfeiters and to signal to money users in general that the state was taking serious measures to ensure the continued exchangeability of notes and coin. Although spared the more heinous punishment of drawing and quartering that was normally reserved for the execution of high treason convicts, male clippers and counterfeiters were hanged, while women were often burned. On the day of execution, offenders were driven in public procession from Newgate Prison to the gallows at Tyburn. These occasions, known as "Tyburn Fair" or "Hanging Match," were notable public events that people from all walks of life observed: "from early morning the factories and workshops were deserted, while at the coffee-houses and taverns parties even formed the previous day."

Some prisoners, such as highwaymen, were allowed to stop along the route to drink with friends, allowing them to arrive

North Wind Picture Archives

Prisoner carted to Tyburn for execution, London, 1700s.

at the gallows suitably sedated by alcohol. Clippers and counterfeiters, on the other hand, since their crimes constituted high treason, enjoyed no such comforts, but were dragged on a sledge without wheels through the sewage accumulated along the London streets, ending up at the intersection of Oxford Street and Edgeware Road, known then as Tyburn Tree and now as Marble Arch. The actual hangings were theatrical, featuring the dramatic last words of the condemned, the relatives' tear-filled farewell, the hangman's often flamboyant performance, the actual moment of hanging, the macabre hangman's dance — which could go on for minutes, especially since the trapdoor had yet to be implemented — and the chaotic aftermath, when relatives and body snatchers struggled to recover the body. This spectacle of terror and the theatrical performance of death situated the onlookers within a web of coercion with the explicit intent of establishing respect for and compliance with the rules of the monetary system.

The well-attended execution of convicted coiner Eleanor Elsom, here described by one of the onlookers, provides a glimpse of how the executions were carried out:

> She was…saturated with tar, and her limbs were also smeared with the same inflammable substance, while a tarred bonnet had been placed on her head. She was brought out of the prison bare-foot, and being put on a hurdle, was drawn on a sledge to the place of execution near the gallows. Upon arrival, some time was passed in prayer, after which the executioner placed her on a tarr barrel, a height of three feet, against the stake. A rope ran through a pulley in the stake, and was placed around her neck, she herself fixing it with her hands. Three irons also held her body to the stake, and the rope being pulled tight, the tar barrel was taken aside and the fire lighted… She was probably dead before the fire reached her, as the executioner pulled upon the rope several times whiles the irons were being fixed.

Newton imprisoned more than 100 suspected clippers and counterfeiters during the height of the monetary crisis. In his first year at the mint (1696), there were 23 capital convictions out of 71 prosecutions for crimes against the currency. The rate of prosecutorial success had improved greatly from the previous year (1695), when 22 people were convicted in 114 trials. The Old Bailey records further indicate that 12 people were found guilty in 44 trials in 1697 and that there were seven guilty verdicts in 20 trials in 1698. After that, when the monetary crisis had passed, the number of annual prosecutions dropped into single digits for the next two decades. According to the historian John Craig, Newton's success in detecting and prosecuting the clippers and counterfeiters, combined with his unwillingness to give amnesty to convicted criminals, reestablished the death penalty as an effective deterrent. For that reason, Newton's tenure at the Mint deserves "significant credit for a great reduction in the volume of counterfeiting." This apparent success encouraged authorities to continue applying the death penalty for clippers and counterfeiters throughout the next century and a half. $

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Frances Perkins

The Woman Who Created Social Security, Unemployment Insurance and the Modern Middle Class

By James S. Kaplan and Olivia H. Kaplan

The recent debates over President Obama's health insurance program and generally over the role of government programs in supporting the middle class have their origins in the social welfare programs implemented 75 years ago during Franklin Roosevelt's New Deal. The most significant architect of these programs was Frances Perkins, who was the first woman to serve as a cabinet officer.

As Secretary of Labor during Roosevelt's presidency (one of only two cabinet officers to serve throughout his entire tenure), Perkins was responsible for designing the social security system, the Fair Labor Standards Act (including the minimum wage), New Deal programs such as the CCC and WPA to provide work for unemployed men (forerunner of the stimulus packages) and the protections for labor unions that spawned their growth. Perkins also sought to implement a system of national health insurance, but she may have been thwarted in this endeavor by Republican efforts in 1938 to have her impeached for allegedly failing to deport communists.

Although other Roosevelt advisers have often been credited for the successes of the New Deal social welfare programs, there is little doubt that Perkins, who generally shied away from publicity, was the President's closest and longest-standing adviser on labor and welfare issues. She was also the driving force behind the creation of the labor and social welfare policies of the New Deal, many of which continue today.

US Secretary of Labor Frances Perkins, 1940.

Perkins had come to Washington with Roosevelt from New York where she had served as the New York State Labor Commissioner during his four years as governor (1928 to 1932). Prior to that position she had served in a similar capacity under Governor Al Smith, Roosevelt's predecessor.

Ironically, Perkins grew up in a family of conservative Republicans who generally disliked the Democratic Party. She began her career with Protestant social reform agencies who bitterly opposed the Tammany Hall politicians who would later appoint her to the prominent positions that would lead her to Roosevelt's cabinet.

Early History

Frances Perkins was born in 1880 into an old line Boston family during difficult times. The family brick business, which had brought prosperity to earlier generations, had gone bankrupt. When she was two, her father, a staunch Republican, moved the family from Boston to Worcester, Massachusetts, where he opened a stationery store. Frances was a bright girl in school and, in a period when only 3% of women went to college, her father encouraged her to attend nearby Mount Holyoke College. She was particularly fascinated by her economic history classes, during which she attended field trips to the local factories of industrializing Western Massachusetts and witnessed their appalling working conditions. After graduation she moved to Chicago where she obtained a subsistence job with one of Jane Addams' settlement houses and also taught at a private school for young women in Lake Forest for about a year. Around this time (1900–1909), the American economy was rapidly changing from agricultural to industrial, with large numbers of workers moving to cities to work in the factories of the burgeoning industrial enterprises. In the factories, there was little regulation of safety, working conditions or pay. The settlement house movement sought to improve the poor through moral and economic education and to provide impoverished families with improved housing and a place to live, but was generally not actively involved in politics.

In 1909, Perkins moved to New York City where she pursued a Master's degree in social work and political science at Columbia University. While attending Columbia she met a number of socially prominent people of wealth, as well as leaders in the social reform movement, including Florence Kelley, the leader of the National Consumer League, an advocacy group seeking to advance the rights of workers. Upon graduation from Columbia, she was offered a position as executive director of this group's New York office. On March 25, 1911, while visiting a friend in Greenwich Village, a huge fire broke out at the nearby Triangle Shirtwaist Factory. Frances watched in horror as hundreds of young women jumped from the seventh and eighth floors to their deaths in one of the worst industrial accidents in the nation's history.

Around this time she moved into Hartley House, a settlement house on Manhattan's West Side in the area known as Hell's Kitchen, a high crime slum district populated largely by Irish and German immigrants. It was notorious for its warring street gangs and the poverty of its residents. Politically the area was controlled by Thomas J. McManus of the McManus Democratic Club, the local Tammany Hall district leader, who had in 1904 wrested control of the district from his erstwhile mentor George Washington Plunkitt.

At the time, Tammany Hall was the city's predominant political power. From the point of view of the social welfare reformers, Tammany Hall was an evil force whose corrupt leaders deluded the poor immigrants from supporting real social reform. From the point of view of the Tammany leaders (who were mostly Catholic), the Protestant social welfare agencies were the tools of wealthy moneyed interests who did not understand the real needs of the immigrant poor.

Perkins realized the contrast between the two competing visions when she was referred the case of a family in which the son, who was the family's sole financial supporter, had been arrested. If he were to go to jail, the family would fall apart completely. Perkins sought help from a Protestant welfare agency which, after a lengthy investigation, determined that the family was not worthy of assistance because one of the children was illegitimate. Perkins was livid. Desperate to help her client, she sought assistance from Thomas J. McManus of the McManus Democratic Club. McManus looked into the matter, and by the following morning all charges had been dropped. Amazed, Perkins began to wonder whether the Tammany Hall district leaders were as bad as her reform colleagues had indicated. This chance encounter in Hell's Kitchen would arguably change the course of American history.

Perkins' job with the National Consumer League began taking her to Albany to advocate for state legislation protecting workers' rights, including limiting the work week of women and children in factories to no more than 54 hours. Through McManus, who was a New York State senator, she met other powerful Democratic Party leaders such as Big Tim Sullivan, Tammany boss Charles Francis Murphy and his protégés, Speaker of the Assembly Al Smith and State Senate Majority leader Robert F. Wagner.

To the skepticism of many of her colleagues in the reform movement, she enlisted the support of these Tammany leaders for the limitation on the work week for women. After some compromises limiting its scope, the bill, which had languished for years, was passed by the New York State legislature. Thus, at the age of 32, she was a rising star in reform and in Democratic Party circles. In 1913, Perkins married Paul Wilson, a fellow municipal reformer who would serve as a high level aide to Mayor John Purroy Mitchell, a major Tammany antagonist.

After the Triangle Shirtwaist fire, a "fact finding" factory commission was formed to study how to improve industrial safety. Upon the suggestion of former President Theodore Roosevelt, Perkins was appointed the executive director. At her insistence, Tammany leaders Al Smith and Robert Wagner were invited to serve as Vice Chairmen. The factory commission's findings exposed the horrific and dangerous working conditions in many New York factories and formed the basis for reform recommendations to the New York legislature, which Tammany candidates generally supported over employer and Republican opposition. In 1918, the Democrats nominated Al Smith to challenge incumbent governor Charles Whitman. To the shock of some of her colleagues in the reform movement, Perkins actively supported and campaigned for Smith, who was narrowly elected.[1]

Smith appointed Perkins to an $8,000-per-year position as a member of the State Industrial Board, likely making her the highest paid female office holder in the county during a time when women had just earned the right to vote. With her friend Belle Moskowitz, Perkins would play a key role in shaping the progressive labor and

Frances Perkins and other elected officials witness President Franklin D. Roosevelt signing the Social Security Bill in the White House on August 14, 1935.

social welfare policies that put New York and its governor, Al Smith, in the forefront of national efforts to protect workers and alleviate poverty. It was largely as a result of these efforts that Smith became a candidate for President in 1928, when Perkins actively campaigned around the country for him against Herbert Hoover.

When Smith's political ally, Franklin Roosevelt, was narrowly elected as New York's governor that year, Roosevelt promoted Perkins to head of the New York State Labor Department. As Governor Roosevelt's Labor commissioner, Perkins won national attention by criticizing the Hoover administration's Labor Department for distorting statistics on the level of unemployment and failing more aggressively to alleviate the financial suffering of workers. By doing so she earned a reputation as one of the Democratic Party's most articulate critics of the Republican labor policies. By the time of the 1932 election, given the severity of the Depression, Roosevelt's election as President was virtually a foregone conclusion.

Once elected it became clear that Roosevelt would seek to expand on a national level the more activist social welfare and labor policies of the Smith and Roosevelt administrations in New York. The natural person to undertake this effort as his Secretary of Labor was Frances Perkins, who had pioneered these efforts as his State Labor Commissioner. However, as the first woman to be offered such a position, Perkins had to consider difficult family issues. She had a teenage daughter in a New York private school and a husband who was hospitalized with severe mental illness. She ultimately made the decision to continue her life's work to help laborers on a national level under a President she had known and worked with for 20 years. As the member of Roosevelt's cabinet with the most governmental experience in implementing and designing social welfare programs, she would be one of the most important members of the administration. The nation was looking to Roosevelt for immediate action to end the Depression, and Roosevelt looked to his Secretary of Labor to design and implement programs to bring the nation out of its economic crisis.

Perkins and Roosevelt understood that in order to improve the economic situation of most working people the government had to aggressively and quickly undertake programs that would increase the purchasing power of the American worker. Perkins immediately became immersed in designing stimulus programs, such as the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC) that would put unemployed workers back to work on government projects.

Perkins also sought to greatly expand worker protection programs, such as the Fair Labor Standards Act, which set maximum working hours and minimum wages. As part of the legislation creating the National Recovery Act, she in effect gave a significant impetus to the formation of unions and created the National Labor Relations Board to regulate employer-employee disputes. Perhaps most importantly, however, was her income security provisions. Perkins created a nationwide system of unemployment insurance to mitigate the harsh impact of job loss.

President Roosevelt was facing strong pressure from advocates of Dr. Francis Townsend in California to establish a program whereby the government would pay pensions to the elderly. Perkins cobbled together staff from various agencies to form a task force which culminated in the passage of the Social Security Act of 1935, creating the modern social security system in which

Frances Perkins greets President Franklin D. Roosevelt upon his return to the White House from the 1943 Tehran Conference.

worker contributions fund retirement.

The popularity of the programs Perkins designed and implemented were an important factor in Roosevelt's landslide re-election in 1936, although her lack of self-promotion in the press[2] and the fact that the accomplishments of women were often downplayed at the time led other members of Roosevelt's so-called "Brain Trust" to receive much of the credit for these programs.

This is not to say, however, that Perkins' role was completely obscure. There were many Republicans who hated Roosevelt and his "socialistic" policies. "Ma Perkins" (a nickname she hated) did in the latter part of his second term become a target for enemies of the New Deal. Among them was Congressman J. Partnell Thomas, chairman of the House Un-American Activities Committee, who in 1938 brought an impeachment proceeding against her for failing to deport[3] Harry Bridges, an Australian Labor Leader who was the head of the West Coast Longshoreman's union and an alleged communist. Although this proceeding was dismissed and she remained in office until Roosevelt's death, Perkins' ability to implement high profile proposals like national health insurance was more limited. Furthermore, as the country moved toward the World War II, Roosevelt's priorities shifted from social welfare to national defense.

Nevertheless, even in Roosevelt's third and fourth terms Perkins played a significant role. During the war she unsuccessfully opposed Japanese internment and proposals for women to have an active role in combat. As Secretary of Labor she did, however, strongly encourage the movement to have women take substantive roles in the defense industries during the war. This policy would ultimately lead to a temporary restructuring of the US workforce in World War II in which women would significantly replace men fighting overseas in defense industries. Furthermore, the growth of union membership to 6.2 million by 1937 had another long-term effect. By greatly increasing the purchasing power of the majority of American workers it would significantly lead to the growth of the modern American middle class.

Thus, Frances Perkins' influence very much remains with us, and she is undoubtedly one of the most important and influential American woman of the 20th century. $

Notes

1. Initially a poor Irish Catholic like Smith appeared to have little chance, running against Whitman (who is former New Jersey Governor Christine Todd Whitman's grandfather-in-law). However, Smith did campaign on worker safety, and on November 1, 1918, a week before the election, there was a horrific subway accident in which 84 people were killed. The Smith campaign argued that the accident was the result of Whitman gutting the Transit Safety Board. With a very heavy vote in Brooklyn and Manhattan offsetting the Republican vote upstate, Smith was narrowly elected.
2. One reason Perkins may not have sought public acclaim for her achievements may have been her family situation. Her husband, Paul, who she tried to visit every weekend for the 20 years she worked in Washington, had severe mental illness and was confined to a mental hospital in New York City. In an era when there was a significant social stigma associated with mental disorders, she may have been concerned about public scrutiny of her husband's situation.
3. The Labor Department at that time also included the Immigration Department.

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Early Corporate America: The Largest Industries and Companies Before 1860

continued from page 25

Pennsylvania and Massachusetts, overcame that disadvantage by conferring banking privileges on utility and railroad corporations. Limited access to external financing was alleviated by building a bank into a corporation that had other purposes. There could hardly be a better demonstration of the fundamental importance of finance in economic development.

1856

The trend toward the increasing importance of transportation evident from 1816 to 1836 continued during the next two decades. In the top 500 of 1856, a year when the total number of corporate charters reached 19,511, transportation dominated the list as finance had in 1816. Transportation enterprises, mostly railroads, made up 341 of the top 500 companies, 68% of the total, and they had an even larger share of top 500 authorized capital, about 80%. Finance now became a distant second, with 90 (18%) of the top 500 firms, and an even smaller share, 11–13%, of top 500 capital. The extractive sector, mostly mining companies, replaced manufacturing as the third largest sector in the top 500, with 5% of the companies and 4% of top 500 capital. Manufacturing enterprises by 1856 were only 23 of the top 500, and they had but 2% of top 500 capital.

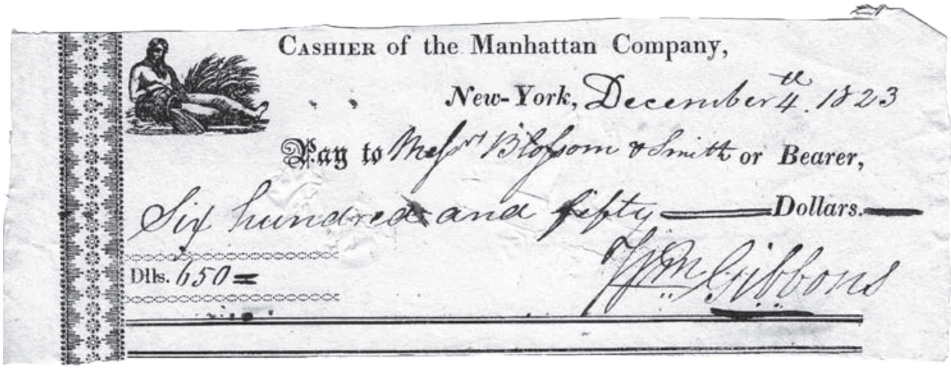
In 1856, the average minimum authorized capital of a top 500 corporation had risen to nearly $3 million, up from just over $1 million in 1836 and $0.33 million in 1816. The majority of the top 500 were railroads, and it took a lot of money to build a railroad.

The rankings of states with the most corporations also changed markedly. The top three states in 1856 were Kentucky (47 companies), Pennsylvania (44) and Ohio (44). These were states centrally located between the East and the West, and between the North and the South. They were the home states of railroads that linked the regions of the US. Massachusetts and New York, which led the nation in top 500 corporations in 1816 and 1836, slipped to seventh (31 companies) and fifth (36), respectively, by 1856. But no state stood out — the corporate form of business organization had spread fairly evenly over the American state landscape before 1860.

Of the 25 largest corporations in 1856, 17 were railroads, two were hybrid railroad and banking companies, four were banks, one was a hybrid utility and bank and one was a canal company. The three largest companies were recently-launched railroads, each of which had "Pacific" in its name. By 1856, the continental US had attained its present boundaries, and plans were underway to link the West and East Coasts, and places in between. For Americans, the corporation was the obvious choice to raise the financing to accomplish that goal.

Museum of American Finance

19th century Atlantic and Pacific Railroad Company bond. The company was the second largest US corporation in 1856.



Museum of American Finance

Manhattan Company check, dated 1823. The Manhattan Company was the nation's fifth largest corporation in 1816.

Conclusion

The US led the world in developing the corporation as the dominant form of modern business organization. It was in 1856, the year this story ends, that Britain at last allowed more than a few of its companies to become corporations with limited liability. By that time, US states had chartered nearly 20,000 corporations, most with limited liability, and still more were being organized under general incorporation laws. Utilizing the corporate form more than any other country, the US by the 1850s was well on its way to becoming the world's largest economy, a status it would reach a few decades later. This new database is helping us to understand the role of corporations in the rise of the US economy during the 19th century. **$**

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Note

1. See http://www.bloomberg.com/news/2012-04-10/-fortune-500-of-1812-shows-u-s-banks-early-influence.html.

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HOW MUCH DO YOU KNOW ABOUT FINANCIAL HISTORY?

TRIVIA QUIZ

By Bob Shabazian

1. Who wrote "a national debt, if it is not excessive, will be to us a national blessing?"

2. Who sits on the Federal Reserve's policy-making Open Market Committee (FOMC)?

3. What is the Federal Funds Rate?

4. What makes up the Dow Jones Composite Average, also known as the 65 Stock Average?

5. In what year, upon Alexander Hamilton's direction, did the United States take out its first loan in the amount of $19,608.81?

6. Who said, "Don't gamble. Take all your savings and buy some good stock and hold it. If it goes up, sell it. If it don't go up, don't buy it."

7. When did the Boston Stock Exchange open?

8. Who founded the Vanguard Group?

9. In what country was industrialist Andrew Carnegie born?

10. What economist and value investing pioneer was born Benjamin Grossbaum in 1894?

1. Alexander Hamilton **2.** The 12 regional Federal Reserve Bank presidents and the five Federal Reserve Board governors **3.** The rate at which banks with excess reserves lend to banks needing overnight loans to meet reserve requirements **4.** The 30 stocks in the Dow Jones Industrial Average, the 20 stocks in the Dow Jones Transportation Average and the 15 stocks in the Dow Jones Utility Average **5.** 1790 **6.** Will Rogers **7.** October 11, 1834 **8.** John C. Bogle **9.** Scotland **10.** Benjamin Graham